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Australian HIDEE FAILMAN MAGAZINE

Issue 165, Vol. 14.No.12



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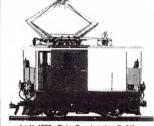
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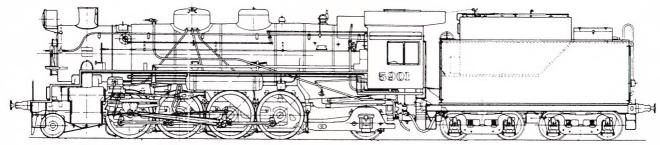
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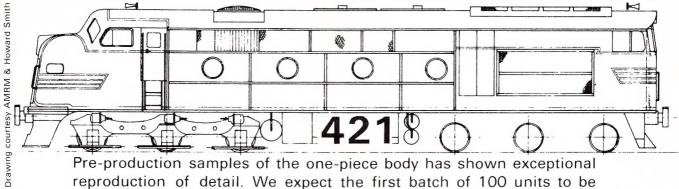
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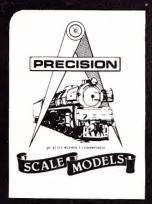
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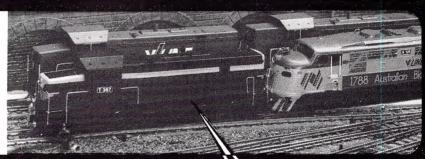
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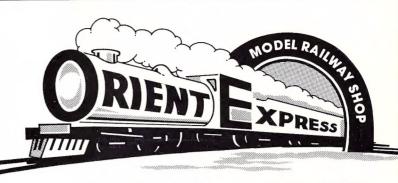
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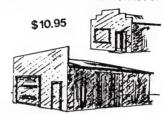
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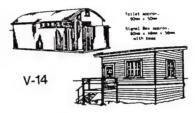


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EXHIBITIONS
BRUNSWICK HEADS - NSW. January 11, 12 1991
at Community Hall, Fingal St., Brunswick Heads.
Open 10am-6pm (Fri., Sat.). Admission \$3/\$1.50/\$8. Details (066) 80 2485.

GEELONG - Victoria. January 25, 26, 27 and 28 1991 at Centenary Hall, corner Cox and Melbourne Rds, Norlane. Open 6pm- 9pm (Fri.), 10am-8pm (Sat.), 10am-6pm (Sun.), 10am-5pm (Mon.). Admission \$3/\$1.50/\$8. Organised by the Corio Model Railway Club Inc.

CROYDON - Victoria. January 26, 27, 28, 1991 at the Maroondah High School Hall, Maroondah Highway, Croydon. Open 10am-9pm (Sat., Sun.), 10amopm (Mon.). Admission \$3/\$1/\$6. Organised by the Croydon Model Railway Club. Details (03) 729 4209. FORESTVILLE - N.S.W. March 2, 3 1991 at Forestville Memorial Hall, Warringah Road/Starkey Street, Forestville. Open 9am-6pm (Sat.), 9am-5pm (Sun). Admission: \$4/\$2/\$8. Organised by North Shore Railway Modellers Association Inc. Details (02) 451 9414

CAMBERWELL - Victoria. March 8-11, 1991 at Camberwell Civic Centre. Open 10am-10pm (Fri., Sat.) and 10am-6pm (Sun., Mon.). Admission: \$5/\$2/\$12. Organised by Australian Model Railway Association, Victorian Branch Inc.

CANBERRA - ACT. March 16, 17 and 18 1991 at Uniting Church Centre, National Circuit, Barton. Open 10am-5pm (Sat.), 1pm-5pm (Sun.), 10am-4pm (Mon.). Admission \$3/\$1/\$6. Organised by the National Model Railway Exhibition Group.

WERRIBEE - Victoria. March 23, 24, 1991 at the Centenary Hall, Watton St, Werribee. Open 10am-6pm (Sat. & Sun.). Admission: \$3.50/\$1/\$7.50. Organised by the Apex Club of Hoppers Crossing. Details: Steve Craven, ph. (03) 480 4177 BH or (03) 749 2110 (AH).

BENDIGO - Victoria. March 29-31 & April 1, 1991 at the TAFE College, 136 McCrae Street, Bendigo, over the Easter weekend. Open 12 noon-6pm (Good Friday), 10am-6pm (Easter Saturday), 12 noon-6pm (Easter Sunday), 10am-5pm (Easter Monday). Admission: \$2.50/1. Organised by the Bendigo Model Railroaders Inc.

IPSWICH - Queensland. May 25, 26, 1991 at Showplace Reception Centre, Ipswich Showgrounds, Warwick Rd, Ipswich. Open 9am-6pm (Sat.), 9am-4pm (Sun.). Admission \$4/\$1.50. Organised by Running Shed. Details (07) 201 6628.

DIARY continues on page 18



It is not hard to be impressed by the gradual progression to O scale by modellers seeking to gain satisfaction from superdetailing. Warren McLean is one who has moved up a scale, the level of his work being illustrated above. The 1/4" scale shop was scratchbuilt from plans and photos in the Narrow Gauge and Short Line Gazette.

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Phillip Dunn, David Bennett, Es Davies
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Australian MODEL RAILWAY Magazine

COMMENT

by Bob Gallagher

CREATING DIVISIONS

Everywhere in discussion forums, and in the model railway press, the subject of improving the hobby is raised. This is generally centered around doing better in model building, such as finer detail on models, prototypically accurate operation, modelling a definitive period, fine scale standards, etc. It will produce quite a variety of views, from newcomers to old timers.

As we progress through the hobby, it is natural for us to produce better models. Everybody does it to some degree or other. Or do some of you disagree? Look around. How many of you have changed to couplers of a more realistic knuckle type? How many have changed the numbers on a proprietary locomotive to give it individuality? Yes, we all improve our models in one way or another. This is one of the basic elements of model railways.

What drives us to do this? I am sure psychologists could give us a number of reasons, but we are not delving into psychology here. I think that the need to be as good as our peer group is one reason. To aspire to a high exhibition standard is another. And for some it is a desire to be looked up to by others as a fine modeller.

Many of us face the fact that our modelling ability will never be as good as we would like it to be. We still improve from model to model, but we know they will never be competition winners. The most encouraging thing about this, though, is that those of us in this category are a pretty large group. And that is contentment enough: to continue to improve our individual modelling standards, and to be open minded about what constitutes a modelling standard for others.

This state of mind is endangered, however, if we allow the view that there is a minimum level to which we must all work. This is often unrealistically high and, for many of us, would be unattainable. It is an unfortunate fact that some very fine modellers will attempt to impose their own standards on everyone with whom they come into contact. They believe their concept of modelling is 'right' for everyone. In some respects, it seems a way of encouraging those of us amongst that large group of average modellers to continue to tell them what fine modellers they are. They might be, but in human development they seem to have fallen short; they have not reached that plane where self- satisfaction is what really matters.

Fortunately, the type of person to whom I am referring is very much in the minority, even among the country's fine modellers. The vast majority do not need back slapping and adulation to feed their enthusiasm. It is this group of modellers who give the rest of us the best encouragement. We learn from them much more easily because they do not want us to see them as a group apart.

Railway modelling is all about enjoying ourselves. If you find yourself in a debate, or read an article, that suggests that there is some minimum standard which we must all reach to 'enjoy' ourselves, and it begins to frighten you off modelling or suggest that you are wasting your time, think again. Modelling to a fine level, with a high degree of accuracy to the prototype is the aim of every one of us. But knowing where to compromise is very important. Being ashamed of our compromises, however, or our general modelling level, is being foolish. Every modeller compromises. So do not be frightened off because someone else thinks they are better than you are. You have only one person to satisfy - yourself, and you are your harshest critic!

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ON THE COVER

T376 on an up broad gauge passenger at Kilmore East in January 1984. Geoff Campbell's photograph shows the contrast of the Victorian summer countryside against the VR blue and N set tangerine. The train consist is the standard V/Line unit of the 1980s - D van and three-car N set - more commonly seen behind an A or an N class mainliner.

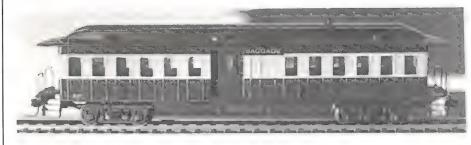
Relax With Model Railways



Doug Atkins produced GM47 from a Lima GM or, in reality, a VR S class. Additions included dynamic brake fan on the No.2 end, the air intakes on the No.2 end filled in and the bogies modified. Doug's work is based on specific prototype models, hence the customised lettering.

PAGE FOURTEEN

PAGE FOURTEEN this issue covers a number of models which have been either built up from kits or kitbashed from existing proprietary models.



A Roundhouse Palace car was the basis for the SAR Centenary baggage car which was kitbashed by Pete Smith.

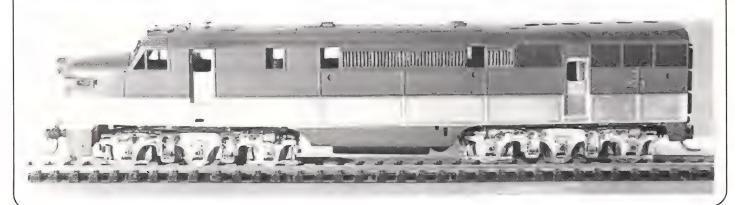


Corio Model Railway Club has a number of members who are testimony to the fact that all good models do not have to be purchased. Cameron Milne is one who strongly believes in scratchbuilding his working models. The V/Line N class, was built not long after the introduction of the class in the mid 1980s. The HO scale model is now in the possession of John Hill, of Kyneton fame.



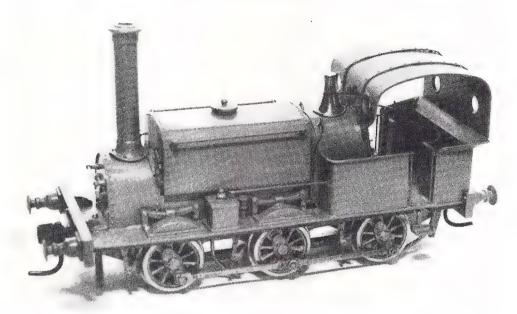
AVAY 78A has been modified from the original red Lima 8300 van by Pete Smith. Additions include shunter's steps, undergear, toilet vent and, of course, Australian National yellow and green livery. Broad Gauge Bodies (BGB) decals were used for the AN worm logo.

SAR 909 started out as an Athearn PA1 but has been heavily modified by Doug Atkins.



MAKING SMALL LOCOMOTIVES WORK

by Paul Berntsen



After some 25 years of building locomotives I have learned a few techniques that help to get wee locos running well. It is only in the last year or so that I have brought together the different ideas into one package. Motors have improved out of sight over those years. When I started with wee locos the only choice one had were the Faller HO racing car motors or the Triang X500 Rocket motor; not a very inspiring thought!

But I digress . . . here are the headings that

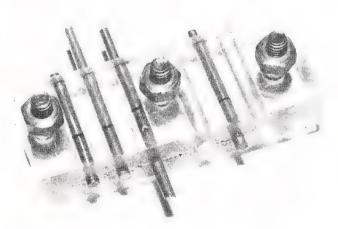
we will look at:

- Wheels
- Crankpins
- Axles
- Siderods
- · Chassis
- Motors
- FlywheelsGearing
- Superstructures

Before we can look at those we need to set some standards.

All chassis for small locos should have split axle pickup. The drag on wiper pickups is enough to upset a wee loco and I have built chassis that have run OK until the pickups were fitted. The answer? Do away with the things!

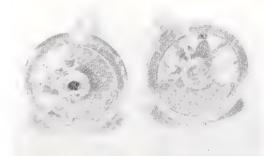
Locos with RP25 wheels for 16.5mm track can be rigid chassis but locos for P4 really need to be compensated. However, this can be subtle;



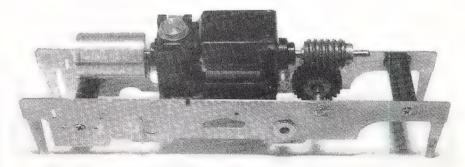
2.0mm split axles gluing in the perspex jig.



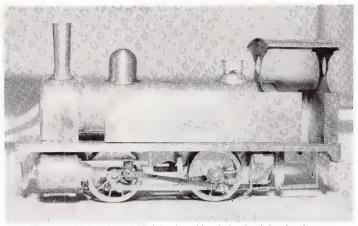
Blanks for home produced wheels. Rims and centres have been turned and the spokes cut with a splitsaw on the milling machine. These wheels are for a P4 LSWR B4 shunting loco.



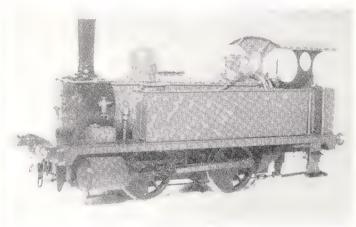
Here one wheel has had its spokes rounded and the rim soldered on ready for final turning. The other is finished, profile turned and drilled ready to cut off its shank.



The chassis for the B4, showing the layshaft with the worm and wheel in place. Spurgears will take the drive down to the rear axle.



The B4 with its chassis finished and basic body sitting in place.



The B4 complete.

they don't need to climb matchsticks!

So! To Start with Wheels

Store-bought wheels need to be uninsulated and herein lies the first problem. Wheels can be de-insulated by fitting shorting wires or by painting with conductive paint. If the wheels are homemade, either by lost wax casting or by hand cutting, well of course it's easier to make them uninsulated in the first place.

After some 25 years of building locos I now use nickel plated tyres all the time as I'm convinced they are the best. Please don't use brass wheels or try to tin your flanges for a better appearance! We no longer live in the dark ages and P4 flanges would not appreciate such treatment.

Crankpins

For small locos I use 0.75mm (1/32") brass plated pins as crankpins. They are strong and don't require too big a hole in either the wheel or the siderod. I keep the rods on with tiny copper

rings wound on a wire and cut with a piercing saw to separate them. Always use a paper washer between the rod and the ring. They are very difficult to separate if a woopsy happens!

Axles

The split axle is the secret to success with these locos. I will now only use stainless steel for axles. To obtain this in a freeturning grade like 303 may be difficult. I had to get my stock of 2mm from the UK.

The process of making split axles is described very nicely in the English 'Model Railway Journal' number 12 which has an article by Barry Luck.

Briefly, if you look at my photo it shows the jig with some axles being glued up. These are 2mm axles. The shorter end has a 1.5mm hole drilled in it about 5mm deep. The longer end has a pin turned on it about 1mm in dia. and 5mm long. The short end has a 0.5mm hole drilled to allow the air out and there is a washer of black plastic wire insulation pushed up the pin. The two parts are Araldited together. If you read the MRJ article

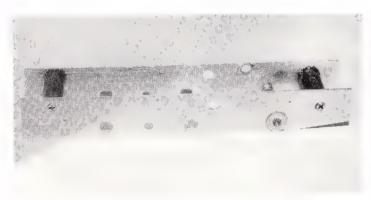
it's very clear and saves me repeating myself in an article that wants to cover a lot of topics.

Siderods

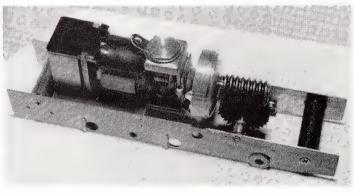
For small locos I like to make siderods from about 0.6mm hard brass. Two thicknesses are soldered together; I usually make a rectangle about 150mm x 25mm. I scribe a centre line first, lay out the crankpin centres and drill them 0.75mm and then lay out and saw out the rods. I drill the knuckle hole 0.5 for fitting a rivet later on. The rods are used as a jig to drill the axle holes and so should be completely finished as making blanks only and filing up later is a disaster area as the rods will stretch with working. However, I keep the rods as a pair until they have finished their jig duty.

Sideframes

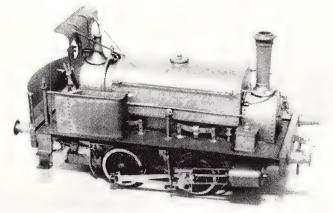
I use a variety of materials for sideframes; it really depends on the style of chassis. If a simple rigid chassis is being made then I use 1.5mm thick extruded brass strip as this is thick enough

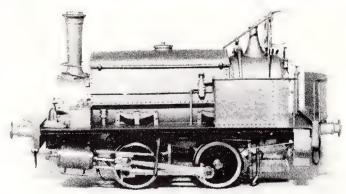


The basic chassis for an Avonside B3 0-6-0 industrial tank loco in P4. Note the rear fixed bearing in place and the slotted holes for the front bearings with their wires fitted to stop the bearings turning.

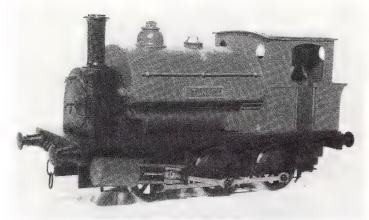


The B3 chassis with motor and layshaft fitted. Neither the B4 nor the B3 wound up with flywheels, although they are shown in the chassis pics. The B4 ran better without it and the B3 was able to have a better shaped boiler without the extra width of the flywheel. Because of the double reduction the running is still very smooth.





Manning Wardle F class 0-4-0 tank in P4 scale. This little fellow has Sharman wheels shorted out, split axle and a Tenshodo Spud motor driving through reduction gears to an Exactoscale gearbox.



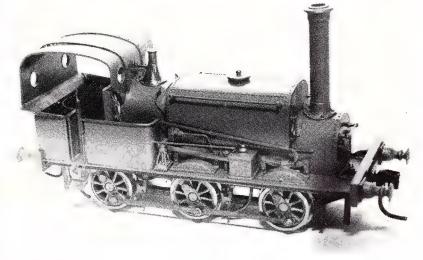
The finished B3 loco.



The finished F class Manning Wardle.

Left and Lead photo: NSWGR Manning Wardle 292 class in HO scale, fitted with 3/4 size Kadee couplers and RP25 wheels.

Below: The chassis of the 292 showing Tenshodo Spud motor, Tenshodo 24-1 gears and NWSL spur gears to the centre axle. This shot also shows a PCB spacer with its insulating grooves.





to provide bearings and is easy to saw and file.

If I'm making an equalised chassis with, say, the Flexichas system, then I'll use brass sheet about 0.6mm thick. I solder two layers together once again and lay out and saw the basic profile.

Holes for brake hangers and other fittings can be drilled now, as well as the mounting holes for cylinders. My favourite method of mounting cylinders involves laying out a centre line on the drawing through the centre of the piston rod and right through to the wheel. On this line I locate the centre of the cylinder horizontally and then I mark out a point about 3mm each side of this. If this information is transferred to the frame then two holes can be drilled. If the cylinders have a horizontal line scribed on them and two holes laid out and drilled, then two pins can be fitted and then when the cylinder is offered up to the frames it slides into place and is located correctly.

There are many ways of building chassis; all I claim is that this way works for me. If it doesn't work for you or offends your engineering principles, then find a better way!

I lay out the axle positions and scribe light vertical lines. Then I lay out the axle height in the frame and scribe an over length line. By locating the rod pair over this line and sighting through the holes, an accurate location is established. I then lightly solder the rods to the frame and drill through the frames with a 0.75mm drill.

After removing the rods, the frame holes are checked very carefully to make sure they are in a straight line and then opened out to the axle size.

On an equalised chassis, the holes need to be opened out to the size of the axle bushes being used. On 2mm axled locos, I use a 3mm diameter bush and fit the driven axle bushes rigid in the frame. The equalised bushes are fitted into slightly elongated holes and have one side of their flange removed and a wire fitted to the frame to prevent the bush turning.

The equalising arrangement for an 0-4-0 is a peg off a spacer above the axle and bearing on the axle to allow the axle to wobble. I agree that this arrangement is not so good in pure engineer-

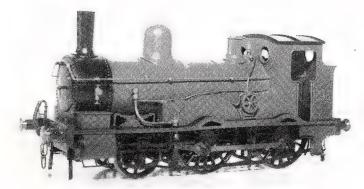
ing terms as the peg takes the weight of the loco and the bushes are only locating the axle but if it's good enough for Mike Sharman to base his Flexichas design on, and good enough for Grandt Line to use in his Porter locos, it's good enough for me!

A six coupled chassis uses the same arrangement but with two lots of elongated holes and a central beam between the axles. I don't propose to illustrate or further explain simple equalisation or Flexichas here; if you are interested get a hold of a copy of Sharman's book on Flexichas as it explains the whole concept. All I will say is that for small locos Flexichas is the simplest design and it works well.

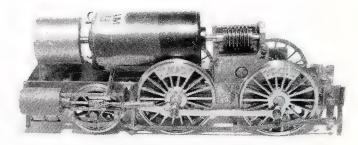
Motors

Here is an area of major advancement! There are three areas of new motor development that aid the tiny loco builder. These are the can motor, the coreless micromotor and the new generation open frame motor.

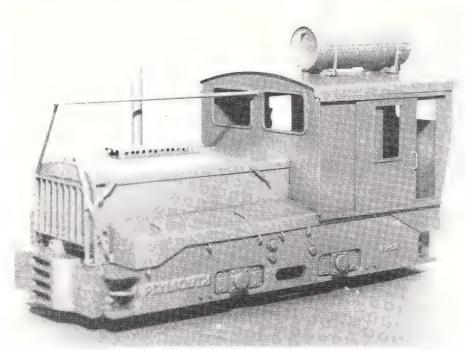
Can motors can be had now as small as



Paul's baby! P4 scale LSWR Beattie well tank with home made wheels and gearbox.



The Beattie's chassis showing the motor/gearbox assembly in place. The motor actually slides into the boiler which is separate from the cab/footplate assembly. This allows a big motor and flywheel, all completely concealed with no cutaway in the boiler bottom.



Not part of this article, but never mind! A 9mm scale 2'0" gauge Plymouth diesel with photoengraved zinc sideframes and radiator header tank to provide the cast lettering.

10mm diameter by 13mm long and micromotors are nearly as small. The new open frame motors such as those from the Tenshodo Spud units are made to similar tolerances to can motors and, for their size, perform very well. Unfortunately there is a trade-off. As motors get smaller so their RPM increases, otherwise torque would be minimal. With large motors gear ratios of 20 to 1 are OK but with tiny motors a ratio of between 40 to 1 and 60 to 1 is desirable.

Flywheels

The small motors respond well to flywheels and I try to fit them to small locos as it helps with power problems and smooths their running. A flywheel is either a blessing or a curse. If the loco runs worse with a flywheel then leave it off as some motors don't like them.

Gearing

There are two ways of achieving a large gear ratio. The first is with very fine, high ratio gears. These can be difficult to mesh and they are less efficient as the ratio gets higher. The next method is to have a double reduction. These once again fall into two categories.

The older method was to have a minor reduction, say 2 to 1, followed by a worm and wheel. This is OK and can be very compact but is very noisy and is inefficient as the minor reduction gears and the wormshaft must run at high revs.

The newer method is to have the worm reduction first and the spurgears as a final drive. This works very nicely.

The best example of this is HO scale diesel mechs from the East. The old ones were arranged as per method one and were very noisy. The newer ones are by method two and are

Rogers Q class 2-4-4 in 9mm scale on the Korero Railway.

smooth and quiet.

I arrange a layshaft across the chassis (in a split axle chassis this must be a wee split axle) and run my final drive spur gears onto the rigid axle of the chassis. The layshaft bearings can be drilled in the chassis if it's deep enough or fitted above it.

One of the benefits of Flexichas is that a gearbox is not required as the driven axle can be arranged rigid. I like gearboxes but they take up space not available to us aficionado of teensy locos!

Superstructures

I build the superstructures for small locos much as for large ones. There is one area that differs - there may well not be room for the luxury of a boiler! Sounds silly but on a saddletank loco I make the smokebox, the firebox and then suspend the saddletank between the two and finally add what boiler is possible below. This may take the form of two curved side skirts if the motor fills the space and there's nowhere else to put it.

There is a way around this but it's complex. A can motor is fitted so it slides into the round boiler and the gearing is arranged to suit in the firebox. I have an LSWR Beattie well tank done this way and the flywheel is in the smokebox but there is no cut-out in the boiler as there are no sidetanks to hide it. In this case the boiler is a sub-assembly and the cab and footplate are a sub-assembly and the motor/gearbox unit is slid into the boiler before the boiler is fitted to the footplate. Finally the chassis is fitted up under the footplate with the rear axle engaging in the gearbox. Sounds complicated? Well it is but the benefit is a hidden drive.

So! Hopefully, the photos show some examples of small locomotives and you will see that it's not too difficult to achieve. Why not have a go and bring to life a few of the delightful tiny locos that have worked so hard building our countries.

DIARY

Continued from page 12

CONVENTIONS

MELBOURNE - Victoria. March 9-11, 1991. Australian N Scale Convention at the Bayswater Community Centre, 1 Dalkeith Road, Wantirna, 3152. Details (03) 720 2873 AH.

STRATHFIELD - NSW. May 4, 1991. SCMRA Seminar at Catholic Teachers College. Details - PO Box 235, Matraville, 2036.

SYDNEY - NSW. May 18 & 19, 1991. NMRA Australasian Region Convention 'American Model Railroading for the 90s' at Macquarie University. Non-NMRA modellers also welcome. Details - Jack MacMicking, 247 Eastern Valley Way, Middle Cove, 2068, ph. (02) 95 5988.

DERAILMENTS

A few derailments occurred in the last issue, some of which need correction.

Firstly, the AR Kit Co advertisement listed a number of prices which were not correct.

The review of the Alco VR T class indicates that the length of the locomotive was 40'8". This is not correct, the length being 41'8", the length of the Alco models being 41'101/2" and 41'81/2". Likewise the width of the loco is 9'0", with the models being 9'3" and 9'0" respectively.

The review of the Lima GY implied that the diagonal yellow line on the side of the wagon indicated the location of the shunter's step was incorrect. The line is the indication used to identify grain proofing of the wagon.

The exhibition report implied that the *Forest Bank* layout, at Broadmeadow, was exhibited by the ACT Model Railway Club. The layout is run by the Canberra Model Railway Club.

And finally, to all those who though that 1990 was just beginning, no it was not the February 1990 issue.

Sorry!

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UNIVERSAL MACHINING CENTRE

Part 4: Building the 'Hoskins' Milling Attachment Don Hoskins

© D. G. Hoskins 1988

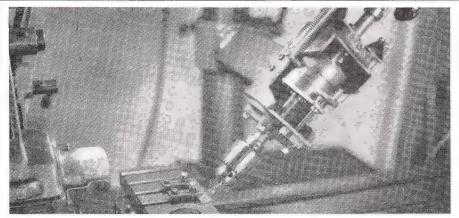


Diagram 4a - Hoskins attachment with head inclined 45°

The desire to make my own design for an attachment arose primarily because of the feeling that no readily available attachment exactly fulfilled all the requirements as I saw them. Thus the idea evolved of producing a design for a tool that could be made in the home workshop, on a lathe no bigger than the basic Myford (175 mm swing; 500 mm between centres); and all to be done without bothersome castings, and not forgetting that milling operations cannot be used (for the simple reason that the user has not yet built his milling attachment!). These objectives have been met, apart from the need for welding at several stages of construction. Also, some keyways in the main spindle are desirable though

not absolutely necessary. I could not find a way of doing this, except by using the first spindle (without keyways) to make a second spindle (with keyways). That way you finish up with a spare spindle; or you merely put the piece of shaft for the first spindle back into stock.

As mentioned in Part 2 (Issue No.160), this milling attachment is designed to mount on my bench drill, in place of its tilting table. The drill also has rack and pinion elevating gear for the table, which is nice, but not necessary.

The mounting permits the milling attachment to be tilted, as can be seen in Diagram 5a, where it has been inclined to an angle of 45°. The head can be inclined to 90°, but this feature would have

Allow margin for finishing

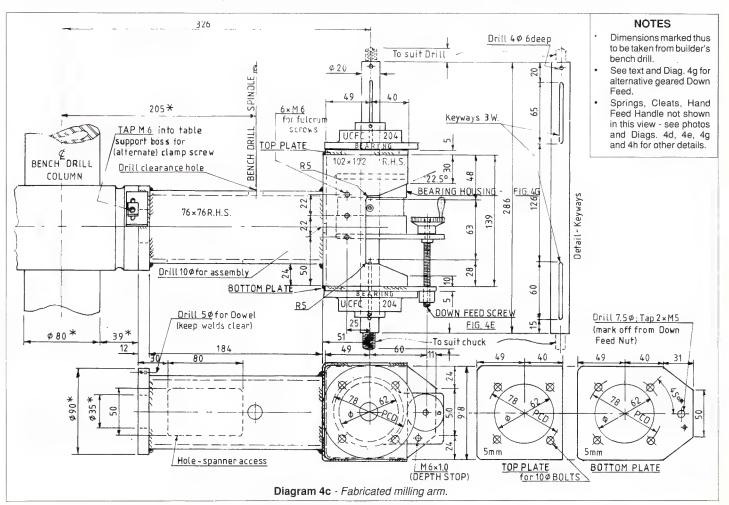
Diagram 4b

Bearing housing bottom cover plate.

limited usefulness.

The question arises of course: what does the reader do if his equipment does not include a comparable bench drill? I could not properly recommend anything substantially lighter than shown. Likewise, a non-tilting table may not be rigid enough for having an attachment mounted on it. It must be the reader's responsibility to decide whether to adapt the design given here, to be fixed to that type of table. A possible solution may be to buy a second-hand drill; it would not matter very much if the business end was worn out, provided the pillar was strong enough and in reasonable condition.

The design of the attachment features the use



Material List

(finished sizes where applicable)

Milling Arm:

- 90 mm dia.(or to match dia. of boss on bench drill table support) x 12 mm plate
- 76 mm x 76 mm R.H.S x 185 mm long
- 102 mm x 102 mm R.H.S. x 140 mm long
- 98 mm x 88 mm x 6 mm plate
- 98 mm x 120 mm x 6 mm plate

Bearing Housing:

- 75 mm O.D. x 40 mm I.D. x 25 mm plate
- 75 mm O.D. x 50 mm I.D. x 20 mm plate (2 off)
- 75 mm dia. x 5 or 6 mm plate
- 1 off 6 mm plate as per Diagram 4b.

Other materials:

- 20 mm diameter bright mild steel x 315 mm long
- 2 off flange units UCFC 204 complete
- 2 off ball bearings UK 205 with adapter sleeves H 2305.

of "off the shelf" flanged self-aligning ball bearings for the main bearings, coupled with a 20 mm diameter spindle (which is the largest shaft diameter that can be fitted in the relevant housings). A dog-pointed set screw in the inner race engages in the keyway referred to earlier, and positively ensures that the inner races rotate with the spindle. At the same time, the spindle is free to move axially in the bearings (when the downfeed is in use), and given a little lubrication at this point, the spindle should last a lifetime. The main bearings are widely separated for maximum stability and, in the space between them, is fitted a bearing housing to which the down-feed screw is attached. The nut of the down-feed mechanism can be readily removed and a hand-lever feed fitted when it is desired to use the attachment for drilling or other operations such as embossing, nibblina etc.

The bearing sizes quoted are from Consolidated Bearing Co. In case readers have difficulty in obtaining exact equivalents, the flange units consist essentially of a rigid bearing, with extended inner race drilled for set screws, and

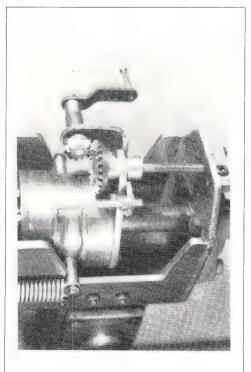
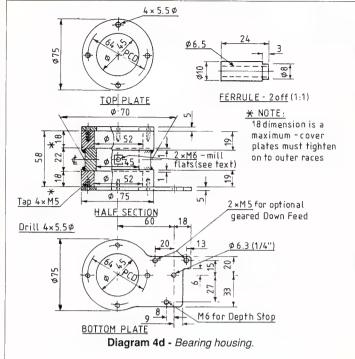


Diagram 4f
Geared down-feed screw assembly.



Stop

Diagram 4e
Down-feed screw and
nut.

the 62 mm bores on to the outside faces of the
102 mm R.H.S. spindle housing, mark out the
cutout for front and sides of housing, and remove
unwanted metal by drilling, filing, sawing etc. Do
not finish off the vertical faces yet as these will
be finished after assembly to act as guides to
prevent the bearing housing from rotating.

lock with

grub screv KNURL

Ø35

COLLAR

(may be

Screw)

M7×1.0

brazed to

SCREW (steel) Engrave on 18¢ tenths and

(Drill 5.5 ¢

twentieths

M7×1.0

Ø18

Handle

The machining of the bearing housing can be carried out to the details shown in Diagram 4d. The housing is shown as fabricated from three separate pieces but if you could obtain a suitable single piece, that would do nicely, provided the bores for the bearings finish up concentric. Note particularly the angular positions of the 5 mm bolts, which are spaced to avoid fouling others.

The down-feed screw and nut are detailed in Diagram 4e. Fortunately, I found a long M7 x 1.0 screw in my scrap box, which accounts for the

the outer race is spherical on the outside to give the self-aligning feature. The UK 205 bearings are rigid, with taper-locking adapter sleeves; they are also spherical on the outside, which latter is not really necessary for the design.

The essential part of the design for the latter bearings is that they must be able to be assembled on the shaft, within the arm housing, and between the flanges as shown; and then locked up tight in such a fashion that axial movement of the spindle is positively under control.

Machining and Assembly

Machining can now be commenced. Diagram 4c shows details of the fabricated milling arm.

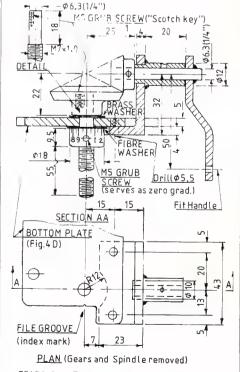
Start with the 90 mm diameter piece, and machine all over, the hole being a good fit on the corresponding spigot on the bench drill. The final truing cut should be made on the face that will be in contact with the bench drill. Most importantly, finally hollow out the centre of this face with an additional light cut of say 0.1 mm, except for an outside ring of about 6 to 8 mm. This will ensure that even if there is some distortion after welding, the arm will fit properly when its securing nut is tightened. Note also the 5 mm hole in this piece for dowelling.

Now the two pieces of rolled hollow section (R.H.S.) can be faced on both ends. They can be gripped in the internal corners using the 4-jaw chuck. The chuck can be fully tightened without distorting the pieces. Machine carefully, but extreme accuracy is not required.

The 80 mm x 50 mm cutout in the bottom of the arm is required to admit a socket wrench. Mark out carefully on the round piece, and on the 102 mm R.H.S., the location for the end faces of the 76 mm R.H.S. Bolt them together temporarily with a long bolt, square up generally, and then have these parts welded together, being careful to omit welding in the vicinity of the 5 mm dowel hole.

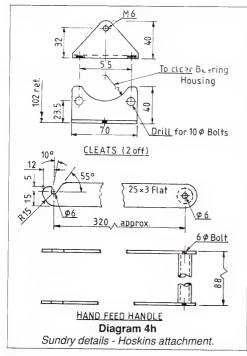
Next, machine the top and bottom plates of the spindle housing to fit the flange units (the 62 mm bore can be machined in the gap on the Myford). Drill the holes for the bolts securing the flange units, and bolt them in place temporarily, using 4 long bolts or threaded rods. The plates should leave enough of the R.H.S. showing to form a "V" for welding. Set up the 62 mm bores square and true to each other, and then weld on three sides as shown. Install the flange units and spindle temporarily, and check that the spindle is parallel to the face of the arm.

Transfer the centreline of the spindle from



GEARS from Threadco-Allgears, Sydney 12 and 24 T. 16 DP (steel) 1/4"bore

Diagram 4g - Geared down-feed assembly.



thrust collar which was silver-soldered on. (Alternatively, steel screwed rod M6 x 1.0mm pitch can be purchased from some sources.) The collar could of course be integral if you had to machine the screw from the solid. The nut can be made from a chunk of suitable brass, squared up in the 4-jaw chuck in the lathe. The M7 x 1.0 tapped hole must be drilled and tapped in the lathe in the same setting as the face, and this face must be marked for assembly to fit against the bottom face of the spindle housing bottom plate.

The down-feed screw described above, and which appears in the photographs, was found accurate in practice, but a little slow and awkward to use when it is desired to feed down a fair amount, or to use the spindle for drilling. A variation was devised to provide a set of bevel gears and a crank handle, which provide both for reasonably quick traverse and exert enough power for drilling. This modification is shown in the photograph (Diagram 4f).

The drawings (Diagram 4g) have been modified, differing from the photograph. In building the attachment you can choose whether to fit the original plain screw, or the geared modification. The gears used are a stock item from a Sydney supplier. The finish of the attachment looks a little rough in the photograph, because it was fitted after assembly of the housing.

Refer to earlier notes regarding selection of a drill chuck and a drill as a power source, and having made that decision, the main spindle can be machined. Note also earlier comments about machining keyways; at this stage you will require at least one tommy-bar hole, not less than 4 mm diameter, for unscrewing of chuck or drill; and you should buy or make two 20 mm collars (one to go on each end of the spindle).

Reverting now to the bearing housing, we will require one M6 tapped hole on each side of the centre part of the housing. These are important, because they not only control the alignment of the bottom plate (which carries the down-feed screw), but their bolts also serve as anchors for the counterbalance springs, and as fulcrum points for the hand-feed lever. If you lack a dividing head to do this accurately, the holes should be marked off, drilled and tapped as accurately as possible. File a flat on each side as shown. Now we should be ready for a trial assembly. With the taper sleeves loose inside their bearings, thread the spindle through the flange units and the bearing housing. Then nip up the sleeves just snug. Put two 6 mm bolts in the central holes in the bearing housing, and take a look at their relationship with the vertical faces on the corresponding part of the spindle housing. The drawings allow for the ferrules being 10 mm diameter; but if you have taken too much metal off, don't panic - just make the ferrules a little larger. If too little metal is taken off, machine up the ferrules to the drawing as per Diagram 4d, and file the vertical faces until the ferrules are a neat sliding fit.

When this has been done, with the bearing housing in its lowest position, mark off the 7.5 mm hole (for the down feed screw) in the bottom plate of the spindle housing, from the corresponding hole in the bottom plate of the bearing housing; also mark off and drill and tap two 5 mm holes for securing the down feed nut.

It remains to make the other small parts: cleats for the springs; hand-feed handle; and include a long 10 mm (3/8") bolt for one of the securing holes for the top flange unit, to take the torque reaction as explained earlier. The springs used have the following dimensions:-

Coil 16 mm O.D.
No. coils 34
Wire 2 mm dia.

No provision is shown for lubricating the ball bearings in the bearing housing, as these were supplied with shields and "lubricated for life". If using substitute bearings, you may need to make provision for lubrication and/or shaft seals.

When assembly has been completed the final alignment can be carried out. First, examine the base plate of your bench drill. These customarily have only two holding down bolts, since the thrust is always in only one direction. With the thrusts to be generated in the milling operation, you will need at least three, preferably four, bolts, spaced fairly evenly around the pillar. The bolts should be at least 10 mm diameter; also, if the base has raised feet on which it rests, place the bolts near the feet if practicable.

Now proceed with the alignment, first setting the milling arm over the bed of the lathe, and at right angles to it. With a round test piece in the milling chuck, set the milling spindle at right angles to the top surface of the bed, by shimming under the base of the bench drill as necessary. Once this has been done, no further adjustment should be necessary except for occasional checking. Next, loosen the nut securing the milling arm and set the spindle at right angles to the bed, in the plane parallel to the length of the bed.

The latter adjustment will have to be carried out every time the setting is disturbed, unless you go to the extra trouble of providing permanent setting marks. These could be of two forms: one; a suitable zero mark on the arm, which is useful fyour drill is equipped with an angular scale (also useful for setting the head at different inclinations); or two; by drilling and fitting a dowel in the 5 mm hole provided in the end-piece of the arm.

A method of improving the clamping of the milling arm has been added to the drawings. If the boss on the bench drill table support is round, and the end-piece of the milling arm is machined to the same diameter, the clamp plate shown in Diagram 4c can be welded on. After assembly, the boss is drilled and tapped for a M6 screw. You will probably have to dismantle the bench drill for this operation, but it is worthwhile.

Reverting to the question of cutting keyways in the spindle, it is important that the attachment is never operated without ensuring that the spindle will always cause the inner races of the flange units to rotate with it. There are set-screws provided in the inner races which will take care of this problem temporarily, but you should plan to make a spindle with keyways as soon as convenient.

Previous Articles in this Series:

The Lathe October 1989
Basic Requirements February 1990
Adapting the Lathe for Milling June 1990

SWAP MEETS

by Ron Richardson

Swap meets are not a recent innovation, but what makes this one unique is the fact that it is held regularly, once a month, except January, on the first Thursday, and caters for all sorts of people. There are model trains, cars, books, tin toys, boats, model kits, magazines and collectibles, both new and second hand.

The venue is the Scout Hall in Tyne Street, Box Hill, Victoria. Competition for stall space is quite fierce and those wishing to sell items usually arrive early. The hall is open about 6pm so that sellers have time to get organised before the doors open at 7pm. The selling starts at 7pm and continues until 9 or 9.30, or until interest starts to flag.

Model cars seem to have a very big following and early Matchbox, Dinky, Minic, you name it, change hands at a price. Model trains of all types and scales are to be had, from O gauge tinplate, through Triang, Lima, Hornby Dublo and Trix Twin, to handbuilt brass from the best of Japanese and Korean makers. The customers vary from grandpas trying to recapture memories, to dads and mums, and girls to grandmas.

One stall had a good selection of second hand Triang/Hornby, Hornby Tinplate and many other items of a collectible nature. As is usual at such an event, some sellers are apt to think that what they have to sell is the greatest treasure to be had, and often ask too high a price. But I picked up a real bargain, 18yds of near new Peco Streamline track for \$15.

The publicity dodger reads Models * Toys * Trains when, in fact, it's diecast cars, model kits, tin toys, model railways, boats, books, magazines and collectibles. I was surprised at the number of cars that were for sale. I'm sure that many a sand pit has been raided for cars left after play has finished, as many were the worse for wear in the paint department. Others, though, were in mint condition and had obviously been bought with resale to collectors in mind.

If you have an evening to spare, and you are in Melbourne on the first Thursday of the month, the Scout Hall in Tyne Street, Box Hill is the venue. 6pm to 9pm if you want to sell, and 7pm if you just want to browse and perhaps pick up a bargain. If you want to sell, bring along a card table, as no tables are provided. If you are a buyer, bring along your wallet and, of course, yourself. You will almost certainly find a bargain of some sort, and a free cup of tea or coffee. Buyers pay a fee of \$1.00, while sellers pay \$3.00.

Those who require more information, ring (03) 795 3646. The Melway directory reference is Map 47 - E7.

I in no way represent the organisers of this swap meet and only found out about it by an advertisement in the Wanted To Sell ads in The Age one Saturday.

There is a similar Swap Meet at Granville (Sydney) on the second Friday of month at Holy Trinity Church Hall, Grimwood & Randle St., Granville. UBD - map 62, 6D. - Editor.

THE JHG BRAKE VAN A BRIEF LISTING

Paul Rogers

The NSWR JHG brake van was a plywood bodied van on a steel underframe which had been reclaimed from condemned PHG brake vans. The characteristics of the van included end verandahs with a guard's compartment. Although recoded NVJF, they were only seen in the red and chrome livery and lettering.

The first two vans were built by Clyde Workshops during 1969 and 1970, with the remaining 98 vans constructed between 1972 and 1977. The first two vans differed in door detail from the others. Brief details and the operational period of the vans are listed below.

the operational period of the vans are listed below.

Twelve vans were designed for use on the Hunter Valley coal traffic, a van being marshalled on each end of the train being used on the loading

points that did not have balloon loops. These vans, initially coded UHG, had strengthened drawgear and underframe and an additional air line for the pneumatic discharge of the hopper doors. Some of these vans were modified JHGs, while others were built as UHGs. They were distinctive from others in the class with their extended coupler mounting. For this service these vans were coded NVUF upon recoding.

Acknowledgements

The listing was completed by Paul Rogers with full assistance from Michael Kerry. Prototype information is credited to John Beckhaus' 'Railway Freight Wagons in NSW, 1982'.

Van No.	Date in Service	Converted UHG	Recoded	Condemned	PHG Underframe	Van No.	Date in Service	Converted UHG	Recoded	Condemned	PHG Underframe
JHG 34001	7/69		NVJA 2/80	8/84	23286	JHG 34056	3/75		NVJA 3/81	10/85	11676
JHG 34001	2/70		1440/(2/00	10/83	13124	JHG 34057	7/74		NVJA 7/81	1/84	14966
JHG 34002	7/72			3/84	23323	JHG 34058	6/74		NVJF 10/80	10/85	18326
JHG 34003	7/72		NVJF 5/81	3/84	15038	JHG 34059	8/74		NVJA 11/80	10/85	25641
JHG 34004	10/72		NVJA 6/82	10/83	15064	JHG 34060	10/74		NVJA 6/81	10/85	23320
JHG 34005	10/72		NVJA 3/80	10/85	14978	JHG 34061	8/74		NVJA 3/81	12/84	17014
JHG 34007	9/72		NVJA 3/80	4/84	11481				NVJF 7/81	12/84	
	10/72		NVJA 3/81	10/85	23313	JHG 34062	9/74		NVJA 6/81	10/85	17011
JHG 34008	11/72		NVJA 10/84	10/85	17066	JHG 34063	9/74		NVJA 2/81	10/85	25611
JHG 34009 JHG 34010	9/72		NVJA 9/81	10/85	23289	JHG 34064	6/74		NVJF 3/81	9/83	15035
	10/72		NVJA 11/80	8/84	25616	JHG 34065	8/75		NVJA 8/80	10/85	14961
JHG 34011	10/72		NVJA 1/82	9/83	17006	JHG 34066	2/75		NVJA 12/81	8/85	23302
JHG 34012	10/72		NVJA 4/80	10/85	23308	JHG 34067	3/75		NVJF 4/81	10/85	11935
JHG 34013	11/72		NVJA 3/80	8/85	25629	JHG 34068	9/74		NVJF 6/81	10/85	18021
JHG 34014	12/72		NVJA 8/85	10/85	23294	JHG 34069	8/75		NVJA 7/80	5/85	17007
JHG 34015	10/72		NVJA 3/80	10/83	10862				NVHF 1/82		
JHG 34016	9/72		NVJA 4/81	10/85	11481	JHG 34070	8/75		NVJA 2/80	10/85	17022
JHG 34017	11/72		144074 -7/01	4/84	10664				NVJF 11/81	10/85	
JHG 34018	11/72		NVJA 3/81	6/83	25621	JHG 34071	8/75		NVJF 6/83	10/85	12304
JHG 34019 JHG 34020		1/79	NVUF 2/81		11351	JHG 34072	3/75			10/80	17019
	11/72		NVJA 5/82	10/85	25619	JHG 34073	10/75			12/84	12108
JHG 34021	11/72		NVJA 4/81	10/85	17021	JHG 34074	8/75	3/77	NVUF 8/81	10/85	
JHG 34022	12/72		NVJA 3/80	10/85	11931	JHG 34075	5/76	3/77	NVUF 9/81	8/85	
JHG 34023	12/72		NVJA 5/80		???	JHG 34076	8/75		NVJA 2/80	10/85	23303
JHG 34024	1/73		NVJA 6/80		23295	0.10.0.0.0			NVJF 2/82		
JHG 34025	4/73		NVJA 3/81	10/85	23340	JHG 34077	8/75		NVJA 3/80	10/85	17023
JHG 34026	1/73		NVJA 6/80		19879	• • • • • • • • • • • • • • • • • • • •			NVJF 10/84	* 10/85	
JHG 34027	5/73		NVJA 9/81	10/85	12307	JHG 34078	9/76		NVJA 12/81	10/85	11754
JHG 34028 JHG 34029	4/73		1440/1 3/01	10/80	23326	JHG 34079	11/76		NVJA 3/82	6/83	23315
JHG 34030	5/73		NVJA 4/80		12245	JHG 34080	4/76			3/78	
JHG 34031	3/73		NVJA 3/82		17350	JHG 34081	9/75	3/77	NVUF 5/81	10/85	
JHG 34032	6/73		NVJA 3/81		23334	JHG 34082	9/76		NVJA 6/82	10/85	12305
JHG 34033	6/73			3/84	23287	JHG 34083	7/76		NVJA 10/85		23330
JHG 34034	6/73			10/83	15040				NVJF 12/81	10/85	
JHG 34035	4/73		NVJA 11/80		23319	JHG 34084	7/76		NVJA 2/80		11942
JHG 34036	6/73		NVJA 7/81		25604	JHG 34085	7/76		NVJF 7/81	10/85	17328
JHG 34037	7/74		NVJA 1/81		11697	JHG 34086	11/76		NVJA 1/81		23296
JHG 34038	4/74		NVJA 4/80		10662	JHG 34087	9/76		NVJA 3/80		11576
JHG 34039	7/74		NVUF 5/81		12767	JHG 34088	8/76		NVJF 10/81	10/85	12134
JHG 34040	12/73			8/74	16201	JHG 34089	† 11/76		NVJA 12/81		10661
JHG 34041	8/73		NVUF 6/8	10/85	25638	JHG 34090	3/76		NVJA 8/81		23332
JHG 34042	4/74		NVJA 3/81		11737	JHG 34091	7/76		NVJA	8/85	11506
JHG 34043	3/74		NVJA 5/80		23290	JHG 34092	9/76		† ALVN		14773
JHG 34044	3/74		NVJA	10/85	11937	JHG 34093	10/76			10/83	17324
JHG 34045	10/73		NVJA 10/80		13785	JHG 34094	4/77	'	NVJA 2/80	8/85	23277
JHG 34046	3/74		NVJA 10/80		13271	JHG 34095	10/76		NVJA 5/82		23282
JHG 34047	6/74		NVJA	10/85	14964	JHG 34096			NVJF 11/81		
JHG 34048	7/74		NVJA 12/80		25623	JHG 34097	7/76	i	NVJA 5/82		12083
1 0,10,01010			NVJF §	10/85		UHG 34098	3 1/77	'	NVUF 3/8		11932
JHG 34049	4/74		NVJA 4/80	5/84	12342	UHG 34099			NVUF 2/82		18110
JHG 34050	6/74		NVJF 6/81		21201	UHG 34100	12/76		NVUF 8/8	1 10/85	23339
JHG 34051	4/74		NVJA 3/81		11296						
JHG 34052	6/74		NVJA 1/81		17016	§ A	ctual date	not knowr	, but before 1	/85	
JHG 34053	5/74		NVUF 6/8		12015		ctual date	not knowr	, but before 1	0/84	2.411
JHG 34054	7/74		NVUF 4/8	1 10/85	25610					ws "before 9/8	54
JHG 34055	5/74		NVUF 9/86		25612				ruck NDKF 10	39, 10/8/	
						tt B	rake test	car BTC 41	00		



AN UNDERFRAME FOR THE TFX

Detailing the TFX passenger car down-under with lan Dunn.

It's so easy to install the new L & C carriage sides into a Lima 72'6" body to make a very acceptable TFX car (but do check the location of the roof vents, see diagram in this article - the instructions are wrong on this point) that it comes as a nasty shock to discover that considerably more work is needed to provide the correct underframe.

The TFX and TBC cars were early members of the 72'6" family, which means that they had underframes with four truss rods. The Lima cars model the later cantilever-type underframe, in which there are only two truss rods, out of sight under the centreline of the car. The various ancillary items which are distributed around the underframe are in different locations, and need to be moved. So, take your scalpel and start carving!

The drawing shows the underframe arrangement of TFX1935 (now at Dorrigo), as viewed

from underneath, i.e. as if the car had been turned upside down.

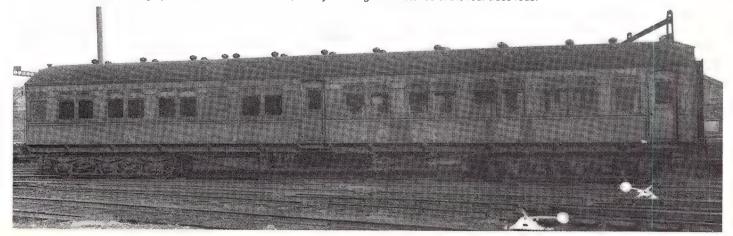
Remove the bogies, then, using a scalpel, X-acto knife or razor saw, carefully remove the battery boxes, generator, water tank, distributor board and handbrakes. When doing this MAKE SURE that when the knifeblade slips, it will do so in a direction away from your other hand, otherwise blood will flow like whisky at a Hogmanay party. Plug the holes with suitably sized pieces of 0.020" styrene and when all is dry, sand smooth so that you have a good base on which to reinstall the detail. Clean up the cut edges of the pieces you have removed for possible re-use.

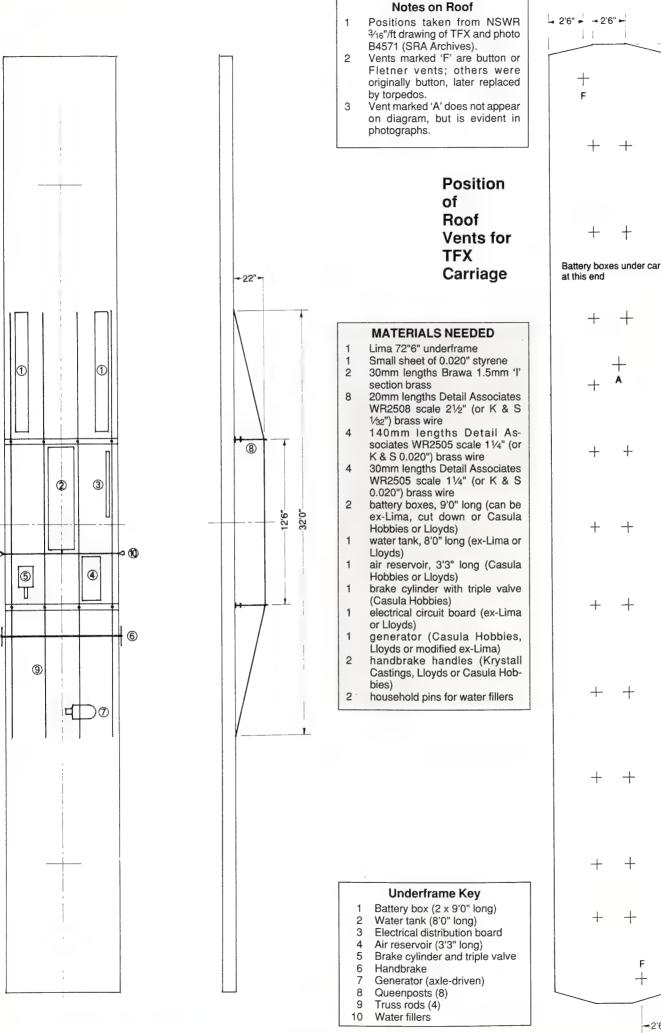
To install truss rods, draw two pencil lines across the underframe, 6'3" either side of the centreline of the car. These mark the positions of the queenposts. Cut two pieces of Brawa 1.5mm brass 'I' section 30mm long and tin one side with a hot soldering iron. Solder four 20mm lengths of

2" diam. brass wire vertically on this I-section, the outside ones 1mm from the ends and the inner ones a further 8mm away. This gives you one set of queenposts. After completing another, wash them clean of flux and superglue them to the underframe on the pencil lines. Next drill No.70 holes through the underframe at the inner ends of the two bogie wells, 2mm and 10mm from each edge. These holes are for passing the truss rods through. Bend up four wire truss rods, 140mm long, to the shape shown on the elevation drawing and bend the ends up so that they will pass through the holes you have drilled in the chassis. Cut a scrap of wood or metal 7mm wide and use this as a template to ensure that all the truss rods are soldered to the queenposts at the same distance from the floor. Solder the truss rods to the queenposts. GENTLY melt the ends into the floor a little and then bend the ends over on the other side of the floor until they are secured and

Above: 3636 at the head of W26 passenger approaching Locksley. The relief Orange day train's load is TFX, NCR set 77 and EHO. Brian Coker photo.

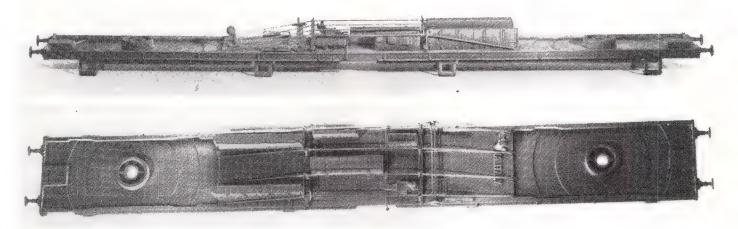
Below: SRA Archives photograph of the 2nd class TFX car, clearly showing the existence of the four truss rods.







The Melbourne Limited Express in 1914. A very new NN1028, later to be recoded 3502, heads two 2nd class TFX cars, a 1st class TBC sitting car, a TAM sleeper, a CAM composite sleeper, KP postal sorting van and high-roof EHO van. SRA photo.



out of harm's way. Solder a cross member (30mm long) of wire across the four truss rods at each queenpost, snip off queenposts to correct length, and clean off any soldering residues.

The rest of the detail is simply glued to the underframe in the positions indicated. If you reuse the Lima battery boxes, you'll have to shorten them to 9', otherwise they'll foul the bogies when they swing. The generator is located with its axis 4'0" away from the nearest axle

(to which, in real life, it was attached by a belt). Water fillers are made by bending household pins near the head and gluing the shank to the underframe. Add toilet chutes and wire steps at diagonally opposite corners.

Don't forget to construct coupler mounts while you're working on the frame, if you want to have body-mounted couplers.

Gently wash the chassis when all the glue has set, and when everything is dry spray overall

black. When remounting the body, the battery boxes go under the end which has a single window mid-way along one side.

This underframe arrangement is common on 72'6" cars, but there were many variations in the location of the various items, so, as always, check a photo if you want to model a particular car.

MAILBAG

Sir,

Towards Realistic Running

It's cold, wet and miserable outside, so I have decided to spend some time catching up on more important things, like reading the latest copy of AMRM (August), even if the chief cook wants the garden cleaned up! (She's going to have to get MY priorities right!)

As I type this (one fingered), I have reached Ron Cunningham's article *Branchline Ramblings*, p31.

In Ron's paragraph, sub-headed 'Scenery', there is one word which has conjured up many rambling thoughts. (You, Ron, are not the only one to have thoughts drift away; mine go a bit further and go awry!)

The word I refer to is 'THROUGH'.

Congratulations, Ron! How often have I been disappointed, when viewing a layout, to see trains running on top of a scene. A beautifully scenicked scene, but specifically designed to display and keep a train in view as long as possible.

When I look at the 1:1 scale, from the equivalent HO viewing distance, it invariably and quickly disappears behind a clump of trees, behind or over the crest of a hill, or around the next curve. It certainly does not stay in sight for long.

In most cases, by the time the last vehicle is in front of my view, the power up front is not. Even in the everlasting distances of the Western plains of NSW or Victoria, they disappear into a cutting or some such.

Why, then, when we look at most (not all) exhibition layouts, do we see this wide open, usually flat, long length of straight track emerging from a tunnel, to eventually disappear into another tunnel, and in view all the way?

What an enjoyable difference, for me at least, to see a layout where the trains have to be seen through the

trees. I have yet to catch fleeting glimpses of a model lost, for instance, behind or amongst a factory scene, or crossing a roadway, with only that part of the train directly on the roadway being visible. The bulk of the train is hidden behind a clutter of buildings or the like.

Imagine the typical layout scene: there is a factory, the loading bay, the extraneous bits and pieces, and a track stretching off to infinity. You can watch a shunt engine push a couple of louvre vans half a mile back and into the loading bay. Nice to watch? Agreed, but this scene is, or can be, repeated in any siding with more than one track.

Imagine the same scene, factory, loading bay, junk, etc., BUT the track comes from behind another factory across the road. Suddenly the back-end of a louvre van appears attached to another and is followed by a loco! That is all that can be seen at this point. Move further along the display and watch the same train emerge and enter the mainline, from behind a fuel depot!

OK, I know a trainline is going somewhere, but why not let me wonder! Where did it come from? Where's it going?

I remember somewhere in the too far distant past, seeing a privately owned dog-bone loop layout, set in (on) a nicely scenicked country area, where the owner had spent hours of hard work.

The track was laid perfectly flat, with the undulating ground-form built up from, but never below, the track, which I suppose was the norm for those days, and I guess fairly acceptable.

The whole scene and effort was totally ruined by having a massive hill located at each end of the baseboard into which trains disappeared, via a tunnel, to reappear, sometimes before the last carriage had followed.

To achieve what? The illusion of distance? Infinity?

The idea was to simulate a double line coming from, and going to, somewhere, but?

This concept is, of course, still relevant today. Aren't we trying to say goodbye to the train, as it disappears into the tunnel, never to be seen again?

But WHY A TUNNEL? Can't a train vanish amongst

But WHY A TUNNEL? Can't a train vanish amongst the trees, behind a building or even into a cutting? And why at the end of the layout? Why would a 1:1 scale railway engineer go to the expense of blasting a hole through a hill, on reasonably flat country, when he could go around it. Or perhaps he builds the hill especially to make the train disappear!

Narrow gauge mountain railways excepted, of course. They always seem to be in the bowels of the earth! But, in a sense, they do have the right idea. Their trains do run THROUGH the countryside.

I appreciate the concept of displaying a train, especially if it's mine, but why can't it be displayed travelling THROUGH the scenery?

When the train pulls into a station, why can't it be seen partly hidden among the panoply of the scene?

As Ron's sub-title says 'Look to the Prototype - in all its Aspects'.

Happy modelling.

Ivan Davis, Drysdale, 3222.

Sir,

Jim Crawford's comments regarding re-magnetising various loco magnets was very interesting (AMRM, June 1990) and raised a personal query about the same problem - I will certainly be looking out for any comment about the subject.

Incidentally, Jim, please feel free to drop me a line regarding the 'home magnetiser' which you produced Continued on page 29.

MODEL RAILWAY CLUBS in AUSTRALIA

1990 Listing

Listed below are the Model Railway clubs active in Australia and seeking new members.

Intending new members should contact the club secretary or designated contact member for further details.

Clubs seeking listing within this column (which is published yearly in the December issue) should send relevant details to 'Club Listing', SCR Publications, PO Box 345, Matraville 2036. To ensure details are current, listings will only be accepted between June 1 and the deadline of October 10 of each year.

NATIONAL ASSOCIATIONS

Australian Model Railway Association. Active branches in Victoria, N.S.W., Queensland and Western Australia. Membership includes AMRA Standards, Guide to Model Railways and the bi-monthly Journal. Membership details to: Federal Registrar, 3 Augusta Street, Strathfield, 2135.

British Railway Modellers of Australia. Informal meetings in major cities organised by regional co-ordinators. Quarterly magazine 'The Clearing House', annual subscription \$20.00. Contact: Harry Howell, 54 Gordon Crescent, Lane Cove, 2066, Ph. (02) 427 2830,

Fax (02) 418 6367

National Model Railroad Association - Australasian Region. Active in all states and New Zealand. Main interest is North American standard and narrow gauge but others welcome. Publishes a quarterly magazine the 'Main Line' and receives monthly magazine, the 'Bulletin' from the USA. Contact: PO Box 529, Epping, 2121, Ph. (02) 477 2395 (Peter Burrows). State contacts: ACT - Kerry McPherson, 21 Crossley Close, Melba, 2615, Ph. (062) 58 1421; NSW - Sowerby Smith, 174 Fullers Road, Chatswood, 2067, Ph. (02) 411 5726; NT/SA/WA - Robert Nelson, 36 Michael Terrace, Mount Pleasant, 6153, Ph. (09) 364 4417; Qld - Ian Venables, 7 Aberfoyle St, Kenmore, 4069, Ph. (07) 378 3647; Vic/Tas - Paul Richie, 28 Ascot St, Ballarat, 3350, Ph. (053) 32 1138; New Zealand - Bruce Seddons, 112 Great South Road, Remuera, Auckland 5, New Zealand, Ph. (09) 520 5509.

Southern Cross Model Railway Association. Contact: Bob Gallagher, PO Box 235, Matraville, 2036, Ph (02) 661 4046, Fax (02) 661 4323. Active branches in N.S.W., Victoria and Queensland. A bi-monthly magazine (Australian Model Railway Magazine) and a quarterly newsletter is produced, along with standards and recommended practices to assist all modellers of

AUSTRALIAN CAPITAL TERRITORY

ACT Model Railway Society Inc. Meetings on 2nd Wednesday evening at 8pm and 4th Sunday at 1.30pm of most months at ARHS Museum Site, Cunningham Street, Kingston. Secretary: Robert Nesbitt, PO Box 4123, Kingston, 2604. Speciality: All prototypes welcome, HO/OO and N scales.

Canberra Model Railway Club Inc. Meetings 1st and 3rd Wednesdays of month at Canberra Railway Museum Club Rooms, Geijera Place, Kingston, 2600. Secretary: Warren Backhouse, 6 Kruse Place, Melba, 2615, Ph. (062) 258 6633. Speciality - 00/HO & N scales in NSWGR, USA and British prototypes.

NEW SOUTH WALES

Albury Wodonga Model Railway Club. every Wednesday (7.30pm) at Albury Police Citizens Youth Club, cnr Keene and Andrews St., Albury, Contact: D. Britton, 10 Schultz Crt, Wodonga, 3690, Ph. (060) 59 2447. Speciality: HO layout (predominantly Australian) but others welcome.

Asquith Model Railway Club. Meetings Saturday afternoons (1 to 5pm) at Asquith. Open to all Primary and Secondary school students. Administrator: John Hallett, 26 Kuring-gai Chase Road, Mount Colah, 2079. Speciality: HO layout, modelling the railway system of NSW, slide and movie shows, talks, weekend excur-

Australian Model Railway Association, New South Wales Branch. Meetings 1st & 3rd Saturdays (2pm) plus 2nd & 4th Fridays (7.30pm) at the clubrooms, Chapel Lane, Rockdale, 2216. Ph. (02) 59 1899. Secretary: David Bennett, PO Box 194, Rockdale, 2216. Speciality: All scales and prototypes. O, HO, N scale layouts. O scale stud contact. Visitors welcome.

Australian Model Railway Association, New South Wales Branch, Nepean Sub-Branch. Meetings 2nd and 4th Saturdays of each month, 7.30 - 10.30pm at Art Centre, Mamre Road, St Marys. Contact: C. Steel, Ph. 623 4570 or P. Chamberlain, Ph. (02) 631 5465. Speciality: Currently improving N gauge layout and new HO/00 layout for 1991.

Berrima District Model Railway Club Inc. Meetings each Friday night (8-10.30pm) and the 2nd Sunday of the month (1.30-4pm) at the upstairs clubrooms at Moss Vale Railway Station. Secretary: Peter McGuire, 36 Nerang St, Burradoo, 2540, Ph. (048) 61 4032. Speciality: HO and N gauge wall and exhibition layouts. All welcome.

Epping Model Railway Club. Meetings at 8pm on several Friday evenings a month in the Epping area. Secretary: Trevor Moore, PO Box 317, Epping, 2121. Ph. (02) 86 3522. Speciality: NSW HO and the club has three exhibition layouts; members are also building modules. The group holds regular clinics on modelling and modelling techniques.

Goulburn and District Model Railway Club. Meetings Friday nights, 7.30 - 9.30pm (Juniors) and Wednesday nights, 7.30pm (Seniors) at Police Citizens Youth Club, Avoca St., Goulburn. Secretary: Sue Nethery, Ph. (048)

21 7063. Speciality: HO & N scale.

Hills Model Railway Society. Meetings Friday nights (except Christmas week) at 7.30pm at Room 8, Balcombe Heights Community Centre, Seven Hills Road, Baulkham Hills. (1st Wednesday of the month is the business meeting.) Contact: Roy Orton, Ph. (02) 634 5079 or Ron McIntosh, Ph. (02) 624 4364. Speciality: N gauge club layout, and HO NSW and OO British layouts under construction.

Hornsby and Districts Model Engineers Society Co-Operative Ltd. Operates Galston Valley Railway at Mid Dural Rd., Galston - 2nd Sunday of each month (1200 - 1600 hours). Social nights 4th Monday (from 1930 hours), Ph. (Wed. and running days only) (02) 653 1630. Contact: Hon. Secretary, PO Box 172, Galston, 2159. Speciality: 31/2" & 5" gauge live steam, petrol & electric powered locos plus other model engineering pursuits. Over 1km ground level track in bushland setting. Visitors welcome.

Illawarra Model Railway Association. Meetings on Mon, and Fri, nights, as well as Sat, afternoon, Contact; Denis Gilmore, 13 Manuka Ave, Dapto, 2530, Ph. (042) 61 7960. Speciality: Australian prototype, with some members having an interest in British, American and

Illawarra N-Gauge Model Railway Club. Meetings Monday nights at members' homes, also every 3rd weekend at Figtree scout hut for a running weekend. Secretary: John Baker, Ph. (042) 84 6677. Speciality: All prototypes catered for. New members always wel-

Inverell and District Model Railway Club. Meetings last Monday of month (7.30pm). Contact: Warren Herbert, Copeton State Recreation Area, Private Mail Bag, via Inverell, 2360, Ph. (067) 23 6269 (anytime). Speciality: All scales and prototypes. NSW HO scale club layout under construction. New members wel-

Lakeside Model Railway Club. Meetings 2nd Monday of each month at 7.30pm at the Lakeside Uniting Church, 28 First Street, Booragul, 2284 or at the Secretary's home, 5 First Street, Booragul. Secretary: Keith King, Ph. (049) 58 6775.

Leeton & District Model Railway Group. Meetings alternate Wednesdays. Contact: Ian Thompson, Ph. (069) 55 7199.

L.G.B. and G Scale Model Railway Club of Australia. Meetings 2nd Saturday of month in members' homes. Contact: Colin Everitt, 54 Somerville Road, Hornsby Heights, 2077. Ph. (02) 476 1912. Speciality: A family oriented club specialising in LGB and G scale garden

Lismore and District Model Rail Enthusiasts Club. Meetings 2nd Monday of each month except January in the Library, Public School, Pound Street, Lismore at 7.30pm. Secretary: Chris Cotter, Ph. (066) 21 4420. Macarthur District Model Railway Club. Meeting 2nd and 4th Saturdays of month at 1.30pm at Reeve Hall, Uniting Church, cnr Allman St & Oxley St (Campbelltown by-pass). Contact: Les Porter, Ph. (02) 603 2016 AH, or Minto Hobbies, Shop 3, Minto Mall,

Minto, 2566. Speciality: Catering for all scales and prototypes. HO scale modular layout in operation.

Model Railway/Railroad Nosh Club. Meetings on an irregular basis - as arranged by consultation among members. Contact: Pat Burke, 2 George St., Barnsley, 2301, Ph. (049) 53 2260. Speciality: Eating, drinking, modelling, philosophical discussion - N, HO & O scales. Model Traction Association. Meetings Feb., April, Jun., Aug., Oct. and Dec. Contact: Arthur Perry. 241 Carlingford Road, Carlingford, 2118. Ph. (02) 871 8393 or 85 3303. Specialty: Catering for those interested in all forms of tramway and electric railways and trolleybuses - worldwide.

New South Wales N Scale Group. Meetings once every month, alternate months at members' homes, other months at Rockdale. Contact: Dave Bennett, 200 President Avenue, Miranda, 2228. Ph. (02) 524 3655. Specialty: NSWGR and other Australian prototype in N scale

North Shore Railway Modellers' Association. Meetings 2nd Friday of month at 8pm, working bees and running nights at other times. Contact: Geoff Brown, 7 Ashdown Place, French's Forest, 2086, Ph. (02) 451 9414. Speciality: All interests from N to O scale, includ-

Our Town HO Model Railway Club. Secretary: Debbie Owen, PO Box 2085, Dangar, 2309. Membership: by invitation. Speciality: HO exhibition layout 'Renegade Railway' of no specific prototype. Free postal advice service on any modelling problem. Send SSAE to above

Peninsula Model Railway Club. Meetings 1st and 3rd Thursdays of each month from 7.30 - 9.30pm at the Umina Uniting Church Hall, rear of Church itself, on Ocean Beach Road, Umina. Contact: D. Smith, Ph. (043) 40 2160 after 7pm. Speciality: HO club layout with no particular prototype followed, but mainly

Australian and US. Juniors particularly catered for.

Riverina Train Masters. Meetings held 2nd Friday each month at 7.30pm in members' homes. Contact: Arthur Robinson, Ph. (069) 24 1251 (AH).

Shoalhaven Christian Model Railway Fellowship. Meetings 2nd Wednesday of the month. Contact: Hugh O'Dempsey, Ph. (044) 21 6484 BH, (044) 64 1804/64 1843 AH. Speciality: Varied.

Shoalhaven Model Railway Club. Meetings 1st Saturday of each month at 9.00am at the Masonic Hall, Moss Street, Nowra. Secretary: Brian Walker, 9 Suncrest Ave, Sussex Inlet, 2540, Ph. (044) 41 2422. Speciality: HO and N scale. Construction of club layout.

Southern Cross Model Railway Association - Eastern Division. Meetings on 2nd Saturday of month at members' homes. Contact: George Giraldi, Ph. (02) 603 3117. Speciality: All scales and prototypes wel-

Sydney Model Railway Society. Mondays, 7 - 9.30pm at Arncliffe. Contact: Arthur Wheatley, 15 Renown Ave, Oatley, 2223, Ph. (02) 953 2640. Speciality: HO layout, freelance Australian, predominantly NSW, timetable

Taree & District Model Railway Club. Meetings 3rd Tuesday of each month at 6.30pm. Working meetings Saturday afternoons (1.30pm) at Taree District Police & Citizens Youth Club. Secretary: George Delandre, c/o PO Box 471, Taree, Ph. (065) 53 5761. Speciality: HO exhibition layout. New members and visitors welcome. Wagga Wagga Railway Modellers. Meetings weekly (Friday night) at 13 Mumford St, Wagga Wagga, 2650. Contact: B. Price, above address, Ph. (069) 31 1644 AH or (069) 21 3414 BH. Speciality: We run HO - American - Australian - and visiting Brits are welcome. Soon constructing a modular type layout for exhibition of Australian SRA outline.

Warrimoo Model Railway Club. Weekly running sessions in evenings in the club room at Warrimoo on 1st Friday of month and all other Saturdays. Secretary: R.F. (Bob) Chrismas, PO Box 7, Wentworth Falls, 2782. Ph. (047) 57 1287. Speciality: HO scale NSW prototype and timetable running.

Wollongong Model Railway Club. Meetings every Wednesday evening (8pm). Secretary: Lyndon Spence, 53 Springfield Ave., Figtree, 2525. Ph. (042) 71 5386. Speciality: Large Australian HO layout.

NORTHERN TERRITORY

Red Centre Model Railway Club. Meetings are held last Sunday of month at 10am at 63 Undoolya Rd, Alice Springs. Contact: Secretary: Kurt Bruns, PO Box 1383, Alice Springs, 0871, Ph. (089) 52 5532 AH and (089) 50 2414 BH. Speciality: Mainly HO, some N gauge, with Australian prototype high on the list.

QUEENSLAND

All Gauge Model Railroad Club. Meetings every Friday night at 7pm at clubrooms, off Zahel St, Carina, phone (07) 395 3200 Secretary: Ted Low, 32 Mordant Street, Doomben, 4007, Ph. (07) 268 4276. Speciality: All scales catered for, club layouts in LGB, HO and Necole.

Beenleigh District Model Railway Club. Meetings 3rd Friday each month at members' homes. Contact: Darren Lee, PO Box 820, Beenleigh, 4207, Ph. (07) 287 4043 AH, (07) 287 2533 BH. Speciality: HO and N scale club layouts.

Caloundra and District Model Railway Association. Meetings on 1st Monday of month at members' homes. Secretary: John Descovich. Ph. (071) 91 2859 or 91 3320. All welcome.

Darling Downs Model Railway Club. Meetings on 2nd Monday of each month at 7.30pm at the Toowoomba Education Centre, Baker Street, Toowoomba. Running days and working bees Wed. evenings at 7.30pm and Sat. afternoons at 2.00pm at Club Headquarters, Stephen Street, Toowoomba. Contact: B. Mesken, Ph. (076) 30 0350.

Dawson-Callide Valley Model Railway Club. Secretary: E. Diery, 15 Manton St, Biloela, 4715.

Gladstone Model Railway Club. Contact: Robert Homam, Kin Kora State School, Hibiscus Ave, Gladstone, 4680.

Railway Modellers' Club of Queensland. Meetings 2nd Saturday of each month at members' homes. Secretary: Peter Woolley, PO Box 327, Runaway Bay, 4216, Ph. (075) 37 2761. Visitors welcome.

Rockhampton Model Railway Association. Meetings every Tuesday (7.00pm) and Saturday (2.00pm) at Room 2, Ground Floor, Walter Reid Cultural Centre, cnr East and Quay Street, Rockhampton. Contact: Graham Merritt, PO Box 1442, Rockhampton, 4700, Ph. (079) 26 1750. Speciality: HO modern American, QR HO and Sn3½.

Townsville Model Railway Club. Meeting every Monday night at 8pm at 67a Rose Street, North Ward, Townsville. Secretary: Brian McWilliam, Ph. (07) 73 1022 (AH), 74 5102 (BH). Speciality: HO & N scale

Union Pacific Model Railroad Club. Meetings every Tuesday (7.30pm) at clubrooms at rear of Holland Park Bowls Club, Abbotsleigh Rd., Holland Park. Secretary: Jim Love, 43 Lucan Ave, Aspley, 4034. Ph. (07) 263 7974. Speciality: HO American to NMRA standards. All welcome.

Warwick Model Railway Group. Meetings held at members' homes on a frequent basis. Contact: Trevor Knight, PO Box 323, Warwick, 4370, Ph. (076) 61 3131 BH or (076) 61 2432 AH. Speciality: A round robin group covering all scales from Z to G.

SOUTH AUSTRALIA

Adelaide Big Train Association. Contact: Tony, Ph.

(08) 248 4430 or Trevor, Ph. (08) 49 1847. Speciality: any train/vehicle - steam, electric or battery - in the larger gauges, i.e. 45mm, indoor and garden layouts. **Adelaide Model Railway Society.** Meetings 1st and 3rd Wednesdays of the month. Secretary: N. Gully, Ph. (08) 277 0349 (AH).

Blue Lake Model Railway Club. Meetings Monday evenings at 7.30pm. Contact: I. Gabell, PO Box 2442, Mount Gambier, 5290, Ph. (087) 25 3987.

Model Traction Association. Meetings 4th Saturday in Feb., May, Aug. and November at 7.30pm in members' homes. Contact: John Eastaff, 8 Flinders Drive, Valley View, 5093, Ph. (08) 264 7611. Specialty: Catering for those interested in all forms of tramway and electric railways and trolley-buses in HO, OO and S scales.

Mt. Barker Model Railway Club Inc. Meetings held 1st and 3rd Tuesday night of the month at 7.30pm at the clubrooms, located at the southern end of Fulford Tce, Littlehampton. Secretary: PO Box 526, Balhannah, 5242. Speciality: HO layout, all prototypes.

South Australian N Gauge Society. Meetings on 1st Saturday afternoon of the month in Richmond Baptist Church Hall, Richmond Road, Richmond and Friday nights at members' homes. Secretary: Paul Tilden, PO Box 155 St Marys, 5042, Ph. (08) 387 2952. Speciality: Modular N scale, N-Trak.

South Australian Railway Modellers' Association Inc. Meetings held every Wednesday night (8pm) of the month and most Fridays at the clubrooms on Australian National land (near cnr Railway Tce and Hughes St), Mile End. Secretary: Austin Balnaves, Box 162, Torrensville, 5031, Ph. 352 2012. Speciality: HO predominantly South Australian.

TASMANIA

Hobart Model Railway Group. Informal gatherings Mondays 8pm at 2nd floor, McCanns Building, Cnr Melville and Elizabeth Sts, Hobart. Contact: C. Elliott, 4 Boundary St, Midway Point, 7171, Ph. (002) 65 1592. Speciality: Small HO/OO, Nlayouts being developed. All scales and prototypes welcome.

VICTORIA

Australian Model Railway Association, Victorian Branch. Social meetings held 2nd Thursday (8.00pm) at Clubrooms, 92 Wills St., Glen Iris, 3146, Ph. (03) 885 7034. The club is also open the 1st Sunday from 1.30pm and 4th Thursday from 7.3pm for 'Timetable Operation' and on the 3rd Sunday from 1.30pm for 'Running Days' on the HO layout. Secretary: John J. Harry, 68 Lahona Ave, East Bentleigh, 3165, Ph. (03) 570 4406. Speciality: HO layout. Modellers of all scales and prototypes welcome.

Ballarat & District Model Railway Club Inc. Meetings Wednesdays (7.30pm) at clubrooms, Sebastopol Community Centre, Yarrowee St., Sebastopol. Secretary: Ron Woods, PO Box 267, Ballarat, 3350, Ph. (053) 34 1762. Speciality: Club HO and N gauge layouts, other gauges represented. Visitors and new members welcome.

Bayside Model Railway Club. Meetings every Saturday (from 1 - 5pm), with monthly business/slide sessions on the last Wednesday of the month. Contact: John Roberts, Ph. (03) 580 2886 or David Hale, Ph. (03) 772 9893. Specialty: Club has two exhibition standard layouts in HOn3 and OO, with an N scale layout under construction. An HO Aust. layout is being

Bendigo Model Railroaders Inc. Meetings last Thursday of month at 8pm, running sessions every Wednesday evening at 7.30pm and Saturday afternoons at 1.30pm at club rooms, Wills Street, Bendigo. Contact: B. or J. Pianta, Box 136 PO Golden Square, 3555, Ph. (054) 47 8780.

Camperdown Railway Society Inc. Club meetings on 2nd Friday and running nights 4th Friday of month at club rooms over theatre, Manifold St., Camperdown. Secretary: E. George, Ph. (055) 97 9263. Speciality: All gauges and scales welcome.

Corio Model Railway Club. Meetings every Wednesday (7.30pm) at clubrooms, Bakers Oval, Geelong West. Secretary: Geoff Evans, PO Box 166, Geelong, 3220. Ph. (052) 78 3881. Speciality: HO Australian, OO British and N scale. Visitors and new members wel-

Croydon Model Railway Club Inc. Meetings every

Wed. night (8pm) at clubrooms, Chirnside Park Shopping Centre, Chirnside Park. Contact: Dennis Pontin, PO Box 133, Croydon, 3136, Ph. (03) 729 4209. Speciality: HO scale Victorian/Australian, American and English and N scale American, English and Continental. Eltham Model Railway Circle. Meetings Monday nights (8pm) in clubroom, 'Pineridge', Cherrytree Road, Panton Hill. Secretary: David Roberts, Ph. (03) 439 1076.

Essendon Model Railway Group. Meetings on 4th Wednesday of month at 7.30pm at Buckley Park Uniting Church Hall, 43 Nimmo Street, Essendon, 3040. Secretary: John Woodward, 5 Ashleigh Court, Kealba, 3021. Ph. 366 9920.

Goulburn Valley Rail Club Inc. (G.V./Line) Meetings 1st and 3rd Mondays each month at 7.30pm. Contact: Ross Musolino, PO Box 1280, Shepparton, 3630, Ph. (058) 25 2636.

Hobsons Bay Model Railway Club. Meetings every Tuesday night at clubrooms on the NW corner of Footscray Rd and Dudley St, West Melbourne. Contact: Rod Young, Ph. (03) 434 2631 AH or (03) 619 6192 (Tuesdays). Speciality: Construction of Vic. Railways layout. Members follow most Aust. prototypes, with a strong core of US modellers. New members welcome. Latrobe Valley Model Railway Association. Meeting 4th Tuesday of month (except December) at 7.30pm in clubrooms, Saviages Rd, Moe, 3825. Secretary: Fred Riess, 21 Maple Cres, Churchill, 3842, Ph. (051) 22 1176. Speciality: Club caters for HO/OO, 3 rail and N gauge and has a layout for each of the above gauges. Leongatha and District Model Railway Group. Meetings 2nd and 4th Tuesday at 7.30pm at members' homes. Secretary: Peter Annison, 59 Koonwarra Rd, Leongatha, 3953, Ph. (056) 62 2756. Speciality: HO, all prototypes. Visitors and new members welcome.

Melbourne Model Railway Society. Meetings on Sat. afternoons from 1.30pm for prospective members only (regrettably no visitors as yet) at clubrooms, 1st floor above Hobbycraft, 1351 Burke Rd, East Kew. Secretary: Ken Elder, 3 Balmoral Ave, Pascoe Vale South, 3044. visitors welcome.

RAAF Laverton Model Railway Club. Meetings on Tuesday and Wednesday evenings at 7.30pm at Building No.75 on RAAF Williams, Laverton, 3027. Ph. (03) 368 2697. Secretary: Paul Rourke, Ph. (03) 741 5601 AH. Speciality: Large HO layout incorporating a small HOn2½ section. Visitors welcome by arrangement.

Sandhurst Model & Miniature Railway Assoc. Inc. Contact: Graham Snell, Ph. (054) 43 6396. Speciality: A newly formed club in the Bendigo area modelling in N gauge.

Southern Cross Model Railway Association, Victorian Division. Meetings on 2nd Saturdays (2pm) and 2nd Mondays (8pm) of month at members' homes Contact: David J. Brown, Ph. (03) 288 6866. All aspects of hobby catered for with particular interest in building models of Australian prototype at meetings.

Victorian Model Railway Society. Meetings held on third Wednesday (8pm) of month at clubrooms in lower concourse of Auburn Railway Station, Victoria Rd., Auburn. Secretary: Lance Cross, 37 Chambers St., Coburg, 3058, Ph. (03) 386 0035. Speciality: Scratchbuilding. O scale exhibition layout under construction. All scales and prototypes welcome.

Wangaratta Railway Enthusiasts Group. Meetings 2nd Wednesday at 7pm at clubrooms, Old Water Tower, Railway Yards, Spearing St, Wangaratta. Contact: P. Cardwell. PO Box 158, Wangaratta, 3677, Ph. (057) 21 9485. Speciality: Modelling (HO and N) prototype history and photography.

prototype, history and photography.

Warrandyte Model Railway Club. Meetings 2nd and 4th Fridays of month at 7.30pm at members' homes, pending relocation to a new building. Secretary: Graham Fry, Ph. (03) 844 2986. Speciality: Construction and operation of N scale layouts; construction about to begin on modular HO layout (VR prototype).

Warrnambool Model Railway Club Inc. Meetings held

on Tuesday evenings (7.30pm) at clubrooms. 4th Tuesday is the Business Meeting. Secretary: Tony Auden, RMB 4160, Port Fairy, 3284, Ph. (053) 50 5549. Speciality: Portable HO layout, work in progress on a large HO layout. Visitors welcome.

Continued next page.

MODELLING AUSTRALIAN NARROW GAUGE

by Reg Smith

Australians can be very parochial when it comes to supporting or defending their place of birth or area of residence. Members of the model railway hobby are no exception and tend to model their own state system or, in the case of expatriates like myself, the state they grew up in. With many of our state systems wholly or partially 1067mm (3'6") narrow gauge, it is surprising that more modellers are not following narrow gauge prototypes.

The potential for modelling present and past narrow gauge railways is fantastic. This can include Queensland Railways, Tasmania (TGR and AN, as well as the Emu Bay Railway), South Australian narrow gauge lines (SAR and CR), the BHP operation around Whyalla and the Silverton Tramway which also operated in NSW and the West Australian Railways. For something exotic. the Australian Portland Cement Company at Fyansford near Geelong had a 1067mm quarry to plant system and operated a variety of locomotives including the last operating Australian Standard Garratt.

In many cases, I believe that potential modellers of narrow gauge systems are not sure how to begin. This short article, hopefully, will encourage both beginners and established

> **MODEL RAILWAY CLUBS in AUSTRALIA - 1990 Listing**

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WESTERN AUSTRALIA

Australian Model Railway Association, Western Australian Branch Inc. Meetings 1st Monday at 8pm, following Saturday at 2pm, following Wednesday at 8pm, following Saturday at 2pm; repeat Mon-Sat-Wed cycle to end of month at club rooms, Moojebing Reserve, Moojebing St, Bayswater. Secretary: Steve Price, PO Box 60, Maylands, 6051, Ph. (09) 447 9159. Speciality: British O and OO; American N scale; 'Railwest' Sn31/2 Special Interest Group; library; newsletter. Visitors and new members welcome.

City of Cockburn Model Railroad Club Inc. Meetings every Saturday at 1pm at clubrooms, Powell Road, Coogee Beach, Contact: Garry Coombe, Ph. (09) 354 2089 or Des Wilson, Ph. (09) 339 7445. Speciality: US outline, HO and N gauge layouts. All visitors welcome club.

Rockingham Model Railway Group (inc.). Meetings on Monday nights (7-11pm) and Saturdays (1-5pm). Secretary: Jeffrey Deane, 13 Merilup Court, Hillman, 6168, Ph. (09) 527 6680. Speciality: HO, OO and N scales.

Western Australian Garden Railway Association. Meetings twice monthly for club business, teaching nights, videos etc., plus running days once a month at members' homes. Contact: Rod Otway, 14 Moss St, Huntingdale, 6110. Ph. (09) 490 2306. Speciality: Live steam and electric garden layouts, with emphasis on family involvement. New members and visitors welcome.

West Australian Model Railway Club Inc. Meetings Wednesday (7.30pm) at clubrooms in Claremont Showgrounds, Club Phone (09) 383 1141. Contact: Tony Gray, 71 Collier Ave, Balcatta, 6021, Ph. (09) 349 3917. Speciality: Timetable operation of very large (over 130m run) 16.5mm gauge to HO scale layout built to represent Australian conditions

NEW ZEALAND
Hutt Valley Model Railroaders Inc. Meetings every Monday night at clubrooms, 67-69 Randwick Cres, Lower Hutt. Secretary: Gavin Sowry, Ph. (04) 67 1802. Speciality: Large 16.5mm gauge layout partially complete. Comfortable lounge and extensive library. All scales and prototypes. Visitors and new members welcome.

modellers to 'have a go' at modelling one of the narrow gauge systems. It does require some scratchbuilding, kitbashing and generally 'scrounging' anything that can be used or adapted to model your favourite railway. Narrow gauge railway modelling is where NSW and Victorian modellers were a few years ago before the advent of Lima and ready-to-run NSW and Victorian prototypes.

How you approach narrow gauge really depends on your skills and what aspects of model building you think you can handle. I will try to indicate what commercial items may be used or adapted to suit the various scales that can be used. Below is a chart showing various narrow gauge modelling scales that have been or can be adopted by the narrow gauge modeller. I am using the American convention of identifying scale and gauge which is commonly in use. For the newcomer, this is a group indicating scale, i.e. HO, 'n' to indicate narrow gauge and a number to indicate gauge in feet; hence HOn31/2 for 3'6" narrow gauge modelled at 3.5mm/ft. (It really should be HOn1067 in these days of metrica-

Name	Scale	Proportion	Track
			Gauge
TTn3½	2.5 mm $\approx 1'$	1:120	9mm
3n31/2	3mm = 1'	1:100	10.5mm
HOn3½	3.5mm = 1'	1:87	12mm
Sn31/2	³ / ₁₆ = 1'	1:64	16.5mm

Our cousins in New Zealand also model 1067mm railways using a scale of 9mm = 1' on 32mm (O gauge) track but this is a real model engineer's scale, well beyond the scope of many modellers as well as demanding large areas for a layout. (Kiwis also mode! NZR in HOn31/2 and TTn3½, the American based 1:120 scale being applied - Editor)

Various ready-made items can be adapted by the modeller in different scales and I will try to indicate these in discussing each scale.

This is probably the smallest practicable scale for modelling 1067mm narrow gauge. I modelled Queensland Railways in this scale for a number of years, including operating an exhibition layout Murrarie, which did the rounds of the Canberra shows for two or three years. Age has now dictated my moving into a larger size. It is a good move for anyone who has been operating N scale railways as track, wheels, etc. can be salvaged and used for the basis of narrow gauge modelling. Some compromise is necessary but the results can be satisfying. Incidentally, the Atlas steam locos (are they still available?) are correct in driver size and wheel spacing to make a Queensland Railway BB181/4 from the 4-6-2 and an AC16 from the 2-8-2.

Actually, I don't know of anyone who is modelling in this scale but 10.5mm HOn3 track is exact for 1067mm modelling in 3mm scale. This opens up the range of American HOn3 bogies, wheels and loco chassis as the basis for modelling Australian equipment at the smaller scale. Shinohara make a wide range of HOn3 track which is freely available in Australia.

This is one of the two popular scales used for modelling 1067mm narrow gauge railways. Track of 12mm gauge is available from Bemo and Shinohara. This scale has been given a boost as far as Queensland modellers are concerned, with the production of kits by Far North Hobbies and Northern Models. The Far North kits

are now being produced by Ian Lindsay Models. Broad Gauge Bodies produce a number of SA narrow gauge items. 12mm wheelsets are available from Bemo and K&M is making a 12mm 9.5mm dia. wheelset.

Loco chassis are a problem. Older Athearn (not the rivetted type presently used) diesel bogies can be narrowed and K&M has a 12mm gauge chassis in production for the QR 1300 Class. This will also be suitable for GE diesel locos that operated in Tasmania and Western Australia. Berliner-Bahnen TT equipment from East Germany can be adapted to various uses. Some of the early small drivered locos used in Tasmania and Western Australia come to mind. A word of caution. Berliner-Bahnen uses coarse scale wheels and will not operate successfully on Shinohara track or points.

(An excellent range of driving wheels is available in the Mike's Models 'Millimetre' range, and goods wagon wheels are available from 3MM Scale Models Railways and, to members, from the 3MM Society, all in the UK. The design of the New Zealand-based North Yard mechanisms allow for narrowing to 12mm gauge. - Editor)

Sn31/2

This was the original scale used for narrow gauge modelling of Australian prototype and is one of the major scales used in New Zealand for modelling indigenous railways. I recall seeing some beautiful Sn31/2 models, constructed by the late Dr. Stephen Suggit, in Brisbane in the early 1950s. Standard HO track can be used but some compromise must be made on sleeper spacing and length. British OO scale track has more accurate sleeper spacing and length. Loco chassis are not a problem as a number of American HO steam loco kits can be used. American diesel wheel sizes are too small but a number of British diesels have larger wheels and can be adapted to modelling Australian prototype. British OO 4 wheel underframe kits can be used to model 4 wheel wagons in Sn31/2. Some items produced in New Zealand may be kitbashed into Australian equipment.

I may have missed some items and, if so, some narrow gauge modeller may care to write to 'Mailbag' to let his fellow narrow gaugers know of some commercial item that may be adapted to narrow gauge use.

Modellers of narrow gauge railways tend to follow the various scales on an area basis. (I am sure someone will write to the magazine and prove me wrong.) Queensland modellers appear to be divided between HOn31/2 and Sn31/2. Tasmanians (those that I know of) model in HOn31/2. While many South Australians model HOn31/2 I am reliably informed that there is strong support in HOn3 where 10.5mm track is used. West Australians lean more towards Sn31/2. This, of course, does not dictate what scale you should use but can influence whether you can operate your equipment on another modeller's layout.

There may be some who don't consider their modelling skills equal to some of the building requirements of narrow gauge modelling at this time. You can still model some of the systems in HO by building the kits available and using standard HO track and wheels. After all it is your railway and the only person to satisfy is yourself. Incidentally, the Northern Models QR 1200 Class body kit fits the Lima 44 class chassis and even the bogies are pretty close.

I hope this article may assist some modellers in modelling the railways of their own state, especially those with narrow gauge operations. After all, the 3'6" gauge began in Australia. Maybe we will see more Australian narrow gauge prototype layouts on the show circuit in the future.

MAILBAG

Continued from page 25.

from a 12 volt car battery; any drawings would also be appreciated.

Whilst on the subject, and probably similar to your problem Jim, I have an old model Hornby Dublo West Country Class loco, which is fitted with a special longshafted motor, which houses an anulus magnet. Does anyone have any clues regarding re-magnetising this type of magnet?

My layout (14m x 6m) is a fully electronic, automatically controlled mixture of Zero 1 and 12 volt, 00 gauge. It is double- stored for 'parking'. It was built to represent a mythical Cyndale mainline and Walt's Halt branch, circa southern UK 1957- 1964.

It is great reading your Magazine!

Wal Criddle, Cooroy, 4563.

Sir.

May I ask, what has happened to the passenger, freight and locomotive plans we used to get in past issues of the AMRM. There hasn't been an HO plan of any State system for quite some time. Re rollingstock! I know there's an ample number of plastic kits, etc., to choose from but quite a number of modellers like to scratchbuild a particular piece of rollingstock to satisfy their ego, so how about it. Bob?

> R. McGuigan. Maryborough, 3465.

We are all aware how important good accurate plans are, and we have a number of drawings which we are hoping to prepare for publication. What we do not have is the research material on hand for the plans to be drawn. Here we draw on readers, like R. McGuigan for instance. If you really want to share someone else's research, we extend to you the hand of welcome to our team of helpers. - Editor

Re the article on page 24, Issue 163, by Keith Elliott and the articles by Ron Cunningham on operation, I thought the following might be of some interest.

I have been a serious modeller for the last 58 years and have always striven for serious operation, with a good deal of emphasis placed on train speeds, etc. Those who have access to old copies of the Brisbane Model Railway Club's journal 'Greenbraid' will be well aware of my rantings on the subject.

For years now I have been controlling the 240V side of the power supply and not the secondary side. This control is carried out by a light dimmer switch. These switches are fairly inexpensive and the results are excellent when it comes to slow running. A pace well below walking speed can be obtained with all types of motors, even the old heavy duty ex-aircraft motors as used in O Gauge House models. However, with today's modern motors, results are even better. This method of control eliminates the hunting and surging which does occur with resistance controllers on the secondary side and which is also at times evident with transistor controllers at various stages.

The fine oil or dry graphite lubrication of the track, combined with this method of control, reduces track cleaning to very odd occasions, even with outdoor track.

Set out below is a sketch to show the layout of the power pack.

The size of the transformer is not of great importance as long as it has sufficient capacity to service the system

The beauty of this simple system is that it is inexpensive and gives maximum realism for shunting, etc.

Should any reader wish to see the performance of trains with this type of control, the writer is quite prepared to accept visitors.

My railway, incidentally, is O scale on finescale track, based on Australian branchline operation and is housed in two sheds, one 8m x 3.6m and the other 5.5m x 3.6m, with some quite heavy grades. The locos pull full loads up these grades at walking pace.

Wishing you further success with your magazine and plenty of happy modelling.

Gordon Parker, Rocklea, 4106.

Readers interested in controlling the 240 volt side of the transformer should consult with their local licensed electrician to ensure that the SAA wiring code has been followed. This will also ensure the electrical safety of the connections. It is an understatment to say 240 volts is very painful; it can and will kill! The extra care you take could save your own life. - Editor.

Sir,
I was interested to read Peter Clark's comments and your own (Mailbag, April '90) regarding the Brazilian 'Frateschi' EMD G12 series models. As a scratchbuilder in QR Sn31/2, these have little personal relevance to me. After all, excellent New Zealand Sn31/2 kits are already available in 1:64 scale, for those who can afford (or prefer) to buy, rather than to scratchbuild.

However, I would suggest that a real market niche does also exist for the Brazilian locos. If you can cast your mind back a mere twenty years or so, you will recall that many, if not most, 'Australian' locos around then were scratchbuilt or kitbashed in an HO/OO scale of around 3.8mm or 3/20" to the foot in order to allow some commonality with both:

- (a) the few then commercially produced items available (mainly Triang) of NSWR or VR prototype, such as the Sydney suburban electric set, the Budd RDC, the VR B class, etc. in 4mm scale; and
- (b) due to the generally much smaller prototypical Australian loading gauges as compared to US dimensions, the adapting of American HO mechanisms to fit into 3.8mm or 4mm scale models (Tyco Pacific chassis under NSW C38, etc.).

Sentinel were cognisant of this, and produced many castings for locos and rollingstock to this 'largerthan-HO' scale. Also, many of the scale plans in magazines such as AMRM, Mixed Goods, Australian Universal Railway Modeller and others, were drawn to this intermediate HO/OO scale.

Consequently, there are still quite a lot of good older layouts in service, based on NSW, Vic., Qld or WA prototype, which are predominantly running 00 or HO/OO scaled locos and rollingstock. Until quite recently, the enormous proliferation of 'off-the- shelf RTR' or 'shake the box' kit rollingstock was confined in the main to NSW prototypes, and other less fortunate disciples of interstate 50s/60s era modelling have often chosen to stick with their older, closer to 00 scale, rollingstock.

Therefore, for many, the newer HO scale offerings may look a little undersized against their existing rollingstock and so they have been starved for readily

available, economically priced motive power.

Personally, over the years, I have met many modellers who have built nice collections of NSW and Queensland models in OO scale, being content with the 16.5mm compromise of '4 ft 1-and-a-fly- speck' in lieu of the correct 3'6" or 4'81/2", as the 00 compromise fits almost exactly halfway between. Oh, sure, they don't generally advertise the fact for fear of being ridiculed by rivet counters and armchair purists but, after all, this is supposed to be a hobby, isn't it? Not some compulsive exercise in tyrannical conformity!

Now, back to Frateschi! To use your quoted dimen-

sions as measured with an HO scale rule as a yardstick (no pun intended). Peter Clark would appear to have erred in stating the Frateschi scale to be about 1:70 or 90% of S scale. In fact, the model in question would appear to be almost 'spot on' in OO scale! Because, with the US Export G12 dimensions on which it is modelled, of 43'0" long and 12'0" high, these would translate in 4mm scale to 172mm and 48mm respectively! (In S scale, these would have to read 204.8mm and 57.15mm.)

However, as your HO rule measures the model at 48'7" and 14'3", this means it is 170mm and 49.875mm, a heck of a long way off S scale (87%) but a very credible 00 scale representation indeed! I've yet to actually see a Frateschi G12, by the way. Whilst modification of the Brazilian body with a file, a knife, some styrene and Plastruct Weld Cement should produce, in just a couple of hours, a very handsome VR T-1, BHP DE3-9 or QR 1400 superstructure (and sideframe modifications for the two Bo-Bo versions should produce little difficulty), QR 1400 or NZR Da running gear could be another kettle of fish. Perhaps the way to go for Co-Co might be to use a body shell only, mounting it on a suitably modified chassis? Athearn Trainmaster, perhaps?

Since these Brazilian locos have been available in New Zealand for a couple of years now, perhaps some Kiwi modeller could advise AMRM on a suitable sugaestion?

Incidentally, I believe that Frateschi also make 1950s vintage Budd RDC models in the same scale, so between these and the G12 Bo-Bo units, South Australian 00 modellers could be interested in modelling their Iron Triangle area.

Further food for thought: with Sn3 Grandt Line bogies and Sn3 Shinohara track and points now available from certain AMRM advertisers, masochists seeking a correct 00n31/2 track gauge might consider this 14mm gauge. I don't know about Frateschi diesels, but it's a relatively simple matter to narrow Athearn units (refer AMRM No. 138, Page 28 for the basic principle).

Well, it looks like a wet weekend again, so, having stirred the pot, I'll let it boil. Meanwhile, I've a couple of Sn31/2, 1:64 scale projects awaiting completion, a Walkers DH and a CO boxcar, so battle it out amongst vourselves!

Arthur Rowe. Yangan, 4371.

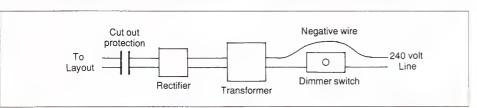
At last, I have read of someone who also is not colour-blind, namely Mr B. Kerslake.

Thank you, sir, for pointing out something that I have been saying for years to various people. That is, the colour on the QLX, CO, CLO, and ALY wagons was indeed originally a grey colour with a very prominent green tinge and was most certainly not blue/grey. The number of people who have disagreed with me is remarkable. Having in my possession a CO wagon painted with 1966 vintage paint of this colour is an absolute blessing as I can use it to refer to when colour matching a new can of paint at the local hardware shop.

The original spec/colourname is unknown to me as, when I needed some, I simply went to the paint shop and dipped in the big drum! However, I think Dulux was the manufacturer. Later shades have been of various tints and my most recent information has it that the colour is simply called Freight Car Light Grey, made by Wattvl.

The QLXP is painted in the same colours as the rest of the system's long distance air conditioned passenger rollingstock of older vintage, i.e. the roof is Dulux Dawn Grey, with the sides Dulux Horizon Grey, NOT white as some people believe. This information is freely available if you ask the right questions of the right department. The paint is available at standard charge from the right hardware shop that mixes and sells Dulux over the counter, so hopefully we should no longer see some of those horrible colour schemes that people and manufacturers inflict upon us as being 'IT'.

I would like to correct another popular misconception, i.e. that the QLX, ALY, CLO and BLC wagons are of standard louvre panels. True, but standard only to the wagon in question, i.e. you won't get a panel from



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a QLX to fit in a BLC, for example, as they are not of common length, height, shape and pitch, as inferred in an article some two years back. Perhaps elastic rulers were the order of the day then!

The reason for this letter is because I notice regularly in the Magazine corrections by many interstate modellers (and officialdom) in their efforts to present the way it 'is/was' correctly on their system, with very little input on mistakes, etc. in information pertaining to our own Quaint and Rattly railway, which hopefully will allow more modellers to present it as it is/was, not near enough to what they perceive it to be.

Glen Wright,

Edens Landing, 4207.

Sir,

Additional information, which has surfaced since my previous letter, reveals that the QR Wagon Grey, of Wattyl origin, is a special mix for QR and not available to the public as an over- the-counter colour.

The only Wattyl colour on their colour charts which comes close is listed as Bayou Waters but it would need to be altered as it appears to be 'too' green.

This is unfortunate as we are again back to the Catch 22 situation of having to colour match something which is close but not correct. After looking at the destroyer in our Maritime Museum, I would agree with Mr Kerslake that this Battleship Grey colour is a very close match.

I would suggest to budding colour matchers that they, if possible, get a fresh chip of genuine paint to use as a reference sample, then any variations of colour will be faded lighter, stained dirtier, or rusted, from there

Alternatively, as mentioned in Mailbag sometime back, take your paint sample to a paint trade centre and have it made up professionally, thus eliminating the 'near enough' syndrome completely.

Glenn Wright, Edens Landing, 4207.

Sir

It is rare for me to put pen to paper in response to other people's letters but, after reading the letter from Pat Burke in the October issue of your illustrious magazine, I feel I should write just a few words about us - the poor exhibitors!

Your editorial makes a distinction between 'modelling railroads' and 'modelling trains'. I agree with your thoughts BUT you left out one of the largest groups of modellers - the 'one day I will' modeller (not to be confused with 'arm chair modellers').

I consider myself to be a LAZY modeller - I need a little push to get things done. I find that 'the next exhibition' will always get a little extra effort from my fragile frame! There are many modellers who build home layouts (one day I will have room for one!) but the majority NEVER finish even half the job. To fill a 5m x 15m room with a scale model of the Tehachapi Loop, Moffat Tunnel AND Union station ALL on a budget of \$7.95 a week takes a lot of imagination and mental stress. My major limitation is fitting the layout in the back of a Mitsubishi L300 van.

There are many books available on how to build layouts. ALL of them assume that you are building a home layout. There are many problems unique to the exhibition layout which are not covered by any books; these are the challenges that give that touch of 'adventure' to railroad modelling. I treat every exhibition as a 'source of learning' and I believe my modelling skills have improved over the years as a result.

A comment often heard from the 'modeller' is that once they have seen a 'super detailed' layout they give up the hobby. Were they ever in the hobby? A painter who visits an art gallery - does he give up painting when he gets home? Or does the reader of a 'best selling novel' give up writing letters.

Of course there are a few other aspects of exhibiting - the many friends you make at exhibitions, the organisers, other exhibitors, even regular 'railway groupies'. I am fortunate in that my wife is involved with the layout; she enjoys the company of other modellers and many of the visitors. She is made welcome at all exhibitions (except one, where she is con-

sidered a freeloader because she doesn't pay at the

In the past six years, my old layout (Franklin County) has covered over 25,000km. During the course of our travels we have made very many friends. To me this is more important than winning any competition at any exhibition. I have learned a lot from other modellers and I hope I have inspired a few more.

Gerry Hopkins, Terry Hills, 2084.

Sir

Congratulations to Pat Burke on writing a letter that may make people think. Bearing in mind that:

- (a) the people that I know just want to see trains running (there is not a lot of visual appeal to static displays, i.e. stationary rollingstock);
- (b) the underlying objective of model railways is to build a miniature scene that has some semblance of reality; and
- (c) model 'railwaying' is an art form and therefore 'to each his own' (who are we to criticise another's art?) then I hereby agree that many folk possibly view exhibition layouts as the 'norm' and say "How could I possibly afford the room to build a model railway?"

Hence, I built my layout Wombat Flats as a compact, HO setup. It contains all that is necessary to convey an image of railway life and all within the confines of an 8x4 board.

I have already offered it to AMRM for an article and, if perchance it is used one day, I trust that you, and others, can be encouraged by what I have done in a limited space.

Timetables? Well, my friend, I built my trains to run and do you know what there is between trains arriving and departing - nothing! And where else would they go, except around. For added realism and enhancement, I encourage you to add that last magical element to model railways - imagination.

Keep going and, above all, have fun.

Hugh O'Dempsey, Berry, 2535.

Sir,

I am a thirteen year old reader and I always greatly enjoy your magazine. The October issue has recently arrived and it is another splendid example of your team's workmanship. However, I feel your magazine could be improved with more articles like P.T. Ennis's VLDX/VLEX conversions, 'Brasstic Boys' (Steve Mc-Elroy and Graeme Pantlin) amazing plastic surgery, lan Fathers' NOAF kitbash and the FQX conversion by Graeme Pantlin. Also, in the April 89 issue, the news section contained a short note expressing your intentions of publishing an article concerning container wagons. Is this still coming?

One last point, and nothing to do with the ones made previously, is when will some company produce an N scale NOBX or NQOY (with 2CM bogies) in full kit form with decals and so on? Loco and carriage numbers (for NSWGR/SRA would be warmly welcomed too.

Jamie Henderson, Berowra, 2081.

Research on the container wagons is continuing and will be published as soon as space permits. Although a relatively recent addition to the railways, the use of container wagons is very extensive. - Editor.

Sir

Thank you for the honour of being the token pre-1910 period researcher (and modeller!) mentioned in print!

I first became interested in pre-1910 railways about six years ago and finally resolved to model a portion of the NSWGR as it was in about 1895 or 1896. However, I quickly found there was not much published information and some (but not all) of that already published should have been placed in the 'myths and legends' category!

The only option left for me was to start my own research and, thankfully, I met a few others who are doing likewise. As a bonus, these people are now good

friends as well! I now have a good collection of drawings, photos, lists and notes to assist me in modelling, but knowledge isn't static and I always want to learn more because I hate to build inaccurate models! A workshop for modellers of the pre-1910 (or even pre-WWII?) period sounds quite interesting and I await the chance to see how many people are interested in modelling the pre-1910 era.

Craig Warton, Arncliffe, 2205.

Would any reader interested in participating in a pre-1910 railway workshop in early 1991 please contact AMRM by letter or phone (02) 661 4046 - Editor.

Sir.

Congratulations on your recent publication, Byways of Steam.

I hope this edition is only the beginning of more. Not being an RTM member nor reader of Roundhouse, I hope you can arrange to have previous articles from Roundhouse, as listed in your book, included in further publications.

Perhaps you could also consider authors from other states?

Good work.

John Elsol, Sunnybank, 4109.

Sir

Congratulations on *Byways of Steam*, which I consider a 'perfect' book on the subject.

I look forward to the future covering of my depot, Lithgow. I grilled the blokes from 1976-1987 re the bad old days, so if you want some info, I may be able to assist. I missed the steam era but knew quite a few 'steamies' during the early part of my career and some of their tales are of interest.

Greg Morris, Bullaburra, 2784.

With the initial success of Byways of Steam, Eveleigh Press plans to publish Book 2 early in 1991. Details of coverage will be advised in a future issue. Like the first book, future editions will be of original essays. Eveleigh Press has no plans to reprint any stories which previously appeared in Rany other publications. - Editor.

Sir

Although I have just started buying and reading Australian MODEL RAILWAY Magazine, I have become very interested in model railways in HO scale. I would like to ask for your assistance and also the assistance of any experienced model railway clubs or private people as to how I would best use an area of 20' x 12' to set up an HO scale model railway.

I would like to include an area of 20' x 2' for a visitors' viewing area, leaving an area of 20' x 10'. I look forward to any help.

D.K. Partridge, Port Pirie, 5540.

Sir,

In response to Brett Watson's recent letter (Mailbag, October 1990) remarking on differing exhaust stacks on 81 class locos, I would like to take this opportunity to offer some clarification.

All 81s, as built, had exhausts as per our HO scale model. From the end of 1987 or early 1988, some (but almost certainly not all) were modified with the stack moved to the alternative position noted by your correspondent. The change was made to correspond with internal modifications to improve the flow of exhaust gases and eliminate some engine resonance problems. Unfortunately this has apparently resulted in some difficulty with EPA compliance and it appears that all locos are now being progressively back converted to the original exhaust specification or something very much like it. So, as far as the Powerline model is concerned, we started out with the exhausts right for the whole class. For a while we were out of date for some of them and now they're catching up with us again!

Further to Stuart Mayne's comments, in the same issue, on the 'Freightrail' (or 'Stealth'), State Rail and Clyde at Bathurst at the recent signing of contracts for

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four new 81 class locos (to be built in part using major spares already in stock) announced that these locos, and possibly the whole fleet, will be painted in a new revised Freightrail Livery. Subject to final confirmation of this livery, Powerline will be releasing both single and dual motor 81s in this new revised livery late 1991 In the meantime, people who don't wish to wait until then will shortly be able to buy Powerline repaint and decal kits for both 'Freightrail' and 'Revised Freightrail' liveries from Powerline dealers.

Specially hand painted (by Platform One), 'Revised Freightrail' 81 class models were presented to SR's Vince Graham and also to the local MP at the abovementioned signing ceremony.

Roger Jones, Research & Development Manager, Powerline Models Pty Limited.

Thank you for answering my query regarding the so-called 'Stealth' livery. Is this the same livery Powerline have been advertising as a future project?

An article for this Magazine could be a series on the unusual and short-lived liveries used on our rails, for example, Bicentennial, 'Stealth', Olympics and the VR tea-cup.

This would cater for modellers wishing to model something different.

Keep up the good work.

Stewart Mavne Woodburn, 2472.

Yes, the new 81 class livery planned by Powerline is called 'stealth' by some observers. AMRM plans to cover each of the subjects listed but Father Time is a constant problem. Offers of assistance, especially from Victoria, would be appreciated - Editor.

Lindsay Collins' great article on 'Fences' (Oct. 1990) neglected to give the distance between posts and the horizontal spacings on three bar wood fences.

As explained to me about 25 years ago by my uncles, Harry and Jack, who had been fencers in North Queensland:

The distance between posts is three paces and the bars are put at ankle, knee and thigh height, measured from the ground by the fencer standing upright.'

Due to 'Shorty' (Uncle Harry) being 6'6" (2m) tall, and 'Lanky' (Uncle Jack) being 5'4" (1.60m) tall, differences occurred when they installed fences using these bush measurements.

As they explained to me, this presented them with no trouble since they took a week about doing wiring and post installation in turn, using these measurements, and if the last distance to the corner post was out, they put in a short length of fence and "Bob's yer

> P. Kelly, Bald Hills, 4036.

Michael Bray's letter (AMRM, October 1990), expressing his wish for an N class to be produced by Powerline or Lima, has prompted me to write this letter concerning his complaint.

While N class locos do perform a large share of V/Line's haulage duties, I feel that Michael Bray has ignored many of the present loco workings still employed by V/Line. B and S class locos, the first of which is soon to join the S class as an available model from Lima, definitely still work regularly on V/Line passenger and freight services. The S class locos are frequently worked on Traralgon line trains, being run there on passenger trains and returning on freights, quite often as lead unit. This is not to mention their frequent appearances on the North East line, along with providing services throughout the rest of the State. The B class are rostered on shorter commuter runs to Kyneton and Seymour. They also perform duties on longer passenger and goods runs. A quick scan of V/Line's loco rosters is proof enough of their practicality as a useful loco, despite their age. To say that these two locos are only of use to the historical modeller would definitely be wrong.

If Lima or Powerline were to produce a new loco, perhaps an X class would be more popular than an N. The N class would suit most modern V/Line modellers but would neglect historical ones. The X class covers a longer period than an N, offers more scope for modellers (two liveries and modifications) and, finally, it can be seen in all aspects of V/Line's operations, thus not restricting it to a particular area.

Lastly, while still on the matter, I read with interest the October 1990 edition of AMRM, that Lloyds Model Railways are producing an injected resin model of the NSWR 421 loco, using toolings from the Mansfield brass loco. If this is possible with all brass toolings, perhaps Michael Bray and others interested could approach companies such as BGM and Finescale Models to adapt the same techniques for the production of plastic N, X and other V/Line locos. For those of us who cannot afford brass, the introduction of further high quality plastic locos would be a most welcome addition to the already wide range of products avail-

Keep up the good standard at AMRM.

Grant Payne, Kyabram, 3620.

Re your editorial in the October issue of AMRM, I can relate to many of the remarks and statements

I spend most of my working time building or repairing 12"/1' horse drawn vehicles and only have RTR stock and locos on my own layouts. Often it is said to me, "Why don't you build your own?"

One of the challenges of building horse drawn vehicles is to see a four wheeler driven away from the shop, running true behind the horse or team, and only leaving two wheel tracks, or a two wheeler running light and true with the horse not having one or the other of the shafts pressed against him to keep the vehicle on its track.

So I don't build my own locos and rollingstock, but try to lay the track and grades so the trains stay on it at any speed and don't stall at badly laid sections, and the locos haul a decent length of train up slopes, not

Also, my layouts are usually at table height (2'6" or 76cm) so I can do the majority of tracklaying, wiring and particularly running, from a chair on castors. After all, I spend my working hours at the bench or on my feet around the shop.

My hobby is just that, a hobby to relax and unwind, or just enjoy its many facets.

All my locos are steam and it's wonderful how relaxing it is to watch the rods and gear working away; one can feel the tensions of a hard or heavy day falling

This is particularly so in summer, when the heat and hot roads cause a lot of the steel tyres to stretch and become loose. Then the sweat flows! Thirty or more degrees and the tyre forge with a six foot diameter fire going to heat the tyres, and sometimes a dozen or more tyres to fit.

Believe me, after a day like that you don't feel too keen on standing up and working on a layout, or having to stand to keep an eye on a train, even though you've had a long shower, a drink or two (tea or beer) and a

I heard a remark some years ago that could well apply to railway modelling. "While there are different schools of thought and controversy over the best way to achieve a common goal, the game's alive!"

Lindsay G. Collins, Holbrook, 2644.

I'd just like to pass on my belated congratulations to the organisers and exhibitors at the 1990 Brisbane Railway Exhibition.

I understand that it was the last public outing of my perennial favourite, Broadford, for some time. Is it possible for us to revisit the layout through the pages of the Magazine?

I am also a Queensland-based Victorian modeller. This does have its disadvantages; no popping down to the tracks to get a photo of your favourite loco, etc. etc. So, come on all you Victorian authors, start writing those articles. They will be well appreciated by Victorian modellers in the far-flung reaches.

At present, I am contemplating modelling HO in true-scale 5'3" gauge. Has anyone ever done so? If so, perhaps a short article on their experiences may be in

Keep up the good work with the Magazine and hopefully we'll see more of Broadford and many other Victorian layouts.

Mark Hodges, Kallangur, 4503.

Is anyone planning to make an HO scale model of the Tangara?

Did the SAR 930 class ever run on standard gauge? If so, in what States?

Also, what sort of trains did the NSWGR MFE class passenger car run in?

Congrats on a 1st class magazine!

C. Davidson, Denistone, 2114.

A number of 930s (including 936, 946, 953, 956, 958 and 964) have worked on the standard gauge in the Adelaide - Port Augusta - Broken Hill triangle since 1982 (see forthcoming book from Port Dock Museum SA Diesels 1980-1989). MFE carriages ran initially on express and mail trains but, since the 1950s, could be found on all sorts of passenger trains, except suburban runs. - Editor.

Before I was retrenched from the State Rail Authority's testing laboratories at Redfern, after 21 years' service, the photographer at the laboratories asked me to assist him in the removal of the negatives, developing chemicals and paper from the photographic section on the 11th floor at Transport House.

The reason we removed the things was because the photographic section, as well as the archives, were closing down. The negatives, chemicals, paper and film were taken to the labs for safe-keeping.

The photographic section at the labs closed down in June 1989 and about a month later the negatives were claimed by the State Archives by the arrangement of the SRA. As my reward for assisting the photographer, I was allowed to go and choose the negatives I wanted and he would develop them for me, so I picked out over 200 negatives.

If your readers would like photographs, I would suggest they contact the NSW State Archives and Government Records Repository at O'Connell St, St Marys, 2760, phone (02) 673 1788 re availability of the photographs.

On a separate matter, a word of warning to readers to get permission first before entering railway property. When the 46 class electrics were at Eveleigh for asbestos removal, a person was arrested for removing the brake valves from these locos. He was also escorted from Mortdale, Flemington and Punchbowl car sheds by the transit police on numerous occasions. The moral is - get permission first before entering railway proper-

> D. O'Brien, Sydney, 2000.

Sir,
This is a call for help! I am, at present, constructing SMR 10 class, NSWGR Z19 and Z20 class locos and require Romford 14mm 13 spoke wheels - seven pairs flanged, one pair unflanged. Unfortunately, only 10 spoked wheels are at present available in the shops and these simply don't look right. If there is some sympathetic modeller out there who has some spares they are prepared to sell, I would be delighted - and relieved.

P.J. Reeks. 14 Leawarra St, Engadine, 2233.

Try the Mike Sharman range of wheels from the UK.-**Fditor**

EXHIBITIONS

Glenroy

Over the weekend of 18 and 19 August 1990, the Metro Model Railway Group ran an exhibition at Glenroy in suburban Melbourne. Glenroy is on the western side of Melbourne and is usually considered a desert as far as model railways go. The Metro Club themselves are based in Coburg and, being in a similar sort of area, therefore would naturally like to keep their exhibitions in the same area.

The exhibition had a number of new layouts which have rarely been seen on the exhibition circuit and a number of layouts that have been seen more often. The Bendigo Model Railroaders had their Victorian Railway layout on display, and the RAAF Laverton Model Railway Club presented their modular layout which specialises in shunting.

The layouts that are never or rarely seen include Gary Ritchie's *Neverending Story*. This is a privately owned layout built in five sections that can be easily transported. It is not modelled on a particular place or area but favours the mountainous areas found in northern United States near the Great Lakes. This layout is under constant change and reflects this in its variety.

The Ballarat and District Model Railway Club's Sierra Pass was once again shown. This N scale layout is still in the stage of being built and is starting to show some of the massive scenery that will eventually be completed on this layout. When you consider it is 30' long by 12' wide, it covers a great area for an N scale layout. It will be very interesting to see this layout as it is progressively finished. When it comes to exhibitions it looks good, but you realise that they still have a fair way to go as they develop this layout.

The Bayside Model Railway Club presented Hemyock and this represents a small town in South West England served by the Great Western Railway for most of its life. The line was closed to passenger traffic in the 1960s and the layout is built on a 7' x 7' square. The Normanton & Picnic Point Traction Company presented a tram layout that is in two parts. One shows the tram going through the built-up downtown area and the other through the countryside. It was very simply constructed and the layout had many scenic items on it. Traction layouts are very rare at exhibitions and it was pleasing to see one that has as much detail as this one had on it and worked so well throughout the exhibition

Another interesting layout was the Z scale layout which shows what can be done in Z scale and the colossal feel of spaciousness a layout in this scale can achieve. The layout was of European origin; there are very few American models available at this stage in Z scale.

The Metro Model Railway Group is to be congratulated on the running of its exhibition at Glenroy because, not only did it receive support from modellers generally throughout Melbourne, but also from a large number of the locals. Grave doubts were expressed prior to the exhibition as to what sort of local support there would be available in this area, so the Club has been vindicated in running the exhibition at this location. They will probably receive far greater support in the future if they continue at the same venue. They attempted to give a good mix of scales and interests, as well as running a second hand stall and also having Train World's large display stand and selling stall at the exhibition. This gave those that were not familiar with model railways a look at not only the scales that were available, but also the extensive range of commercially available trains there is on the market.

Brian Comport

Sydney (Liverpool)

The long weekend, 29 September to 1 October, heralded the staging of the 28th annual exhibition of the Sydney Model Railway extravaganza at the E.G. Whitlam Centre at Liverpool, west of Sydney.

Everyone who is anyone usually attends to see what the offerings are and to meet up with peers in the hobby. The entry fee was five bucks this year and no-one appeared to grumble, as the value was definitely there, as is the case most years. Some 70 exhibitors were featured, which included trade stands and a food

outlet. It took me some two hours to take in all the delights, with a further visit on a second day to absorb a bit more.

All the trade stands offered exciting material, everything from the latest plastic kits to publications and well made videotapes of recent steam jaunts around Sydney. Rail and tramway organisations and museums were well represented, including 3801 Ltd and a newly noted museum from Cowra, which had a number of offerings such as a Holland and McKenzie signal finial (rare) which could be purchased for the princely sum of \$95.00. It's pity I didn't have my little green lunch bag with me as I would have been tempted to bargain over the price, or shove it into my bag when they wasn't lookin'. I won't tell if you won't!

Now, as it's not my policy to bore you to tears by giving a rundown on every exhibit, I thought I'd be merciful by limiting my comments to only the 'new' exhibits which appeared this year, since many of the layouts have been exhibited already in previous years and were reported upon at that time. The HO layout which received top recognition this year was Alynvale, which hails from Nundah (Brisbane), Queensland. This was a joint presentation by Messrs Phil Gibson, Brett Thomas, Russell Smith and John Morgan (Sydney) and is based upon the trackplan for 'Bolivia' located in northern New South Wales. It was deemed to be a brilliant piece of modelling depicting 'typical' NSW type buildings and scenery. People even gave it 'third' looks. This exhibit featured single branchline operation diversifying into a refuge road and goods roads immediately in front of the station platform. A typical good siding leading to a 'Milk Factory' dominated the right side of the layout as viewed from the front. Traffic was heavy on the line, with crossing trains at regular intervals. D57s and D58s were the mainstays of traffic, together with 60 class on general goods and 30T and 32 class on a rake of passenger cars. 38 class also did their turn, along with a 24 class on a small pick-up freight. This layout was equipped with excellent lighting which lit-up colour and detail to the utmost. Indeed a pleasure to watch.

For lovers of O gauge, there was a British outline layout exhibited by the North Shore Railway Modellers, aptly named *Northyard*, which was based on the LMS and GWR of the 1930s. This layout was operated as a point-to-point layout under the supervision of Deric Netting and Terry Cooper and featured a traverser, turntable and sidings into typical UK industrial environs of the period. One didn't have to strain one's eyes to enjoy the excellent detail portrayed on this exhibit, which hails from Brookvale on the Northern Beaches of Sydney.

From Newcastle came the HO layout Ferndale Road, presented by the Our Town Model Railway Club. This exhibit featured dual mainline running, with an interesting trestle bridge in place. Operations were mainly diesel-hauled trains, featuring double-heading 40 and 48 class on long freight trains.

If I don't mention Henry Hofmann, I will be in a lot of trouble. Henry exhibited two layouts of European outline. As his name suggests, he is up to his armpits in Fleischmann, Roco, Marklin and Lilliput, and still maintains that Marklin never stops running.

Nebroc Railway, presented by Wal Corben, was another European style layout featuring automatic train control. This layout has been altered from last year's set-up and also featured the proverbial 'burning' town hall building in the middle of town. I hope they save the train layout on the top floor first!

New this year was *Possum Flats* under the control of Doug Clark and our olde mate, Mick O'Hanlon. Well, I saw Mick running his modelling efforts on this HO layout and so I wouldn't be game to say he wasn't involved. Don't worry, we all like you Mick!! Possum Flats is apparently based on the Northern District of the First State in the 1950s. There was plenty of action on this layout. BIB, NIB, BOB and HUB cars thundered around, headed by everything you'd expect or want to see, including an AC 38 class (articulated C38 as was proposed). There was no shortage of NSWR diesels, including 73 class, whilst the exhibit featured a 60' turntable, elevated water tank and a typical NSW goods

shed. Moving on, the Lake Syde layout was inspected, being operated by Bob Gore and featured double mainline operations of mainly diesel-hauled trains in HO scale. This layout reminded me of the prototype setting of 'Tahmoor' with well detailed adjacent platforms fitted out with typical NSWR weatherboard buildings.

Richmond, in N scale, was exhibited this year by Mick Lovell, with many additions since its inception. Phil Badger was, of course, nearby and he showed me his latest creation from a photo etched fret, namely one you-beaut N scale S wagon. Phil would like to ask you all out there if anyone may have taken any photos of the old weighbridge at Richmond and would appreciate it if you would contact him care of AMRM editorial staff.

The next exhibit of great interest sighted was Warrah under Reconstruction. Here, one gets to see the very bones of a layout taking shape, showing benchwork assembly and benchwork photos by Craig Armstrong and his team. Interesting to note was the use of cardboard spacers to represent proposed permanent timber construction features, which was indeed very clever and innovative.

Following on from this exhibit, my attention was drawn towards the presentation performed by the family team of Kay, Ted and Rob Flowers, who demonstrated their scenery construction techniques which never fail to impress. Bob gave out a few secrets, particularly the use of artificial fur and tapestry wool to simulate life-like foliage for trees and low profile bushes. An interesting technique, very likely to change a few concepts held by some serious modellers.

After this, I sighted only five more new layouts for this year. These were Adam Sayer's *Glendale* layout, featuring a typical double track NSWR environ, with Z19 class hauling block coal trains consisting of LCH hoppers. Then, Reid Gafey's Nn3 scale layout *Bison Peak*, simulating a 3' narrow gauge railway in Colorado, USA, around 1900.

Following on, was Brian Moore's N scale based on US prototypes. Then there was the Macarthur District MRC's presentation of dual HO gauge mainline running based upon 'Old Minto' environs with NSWR steam and diesel classes hauling block trains. Last, there was the Severn Valley Railway presented by Rohan and Deidre Norman, being based upon the preserved namesake in the UK. Aspects of interest on this exhibit were 'Highly Station' and a scale replica of an early Victorian railway bridge. GWR and LMS steam locos were the main horsepower on this interesting point-to-point layout.

All of the above five presentations created much interest this year, with plenty going on by way of train operation

By this time, I was ragged on my feet and about to fall over if I didn't call it a day. The exhibition overall this year was, I felt, most satisfying and seemed to cater for everybody's taste. All exhibitors are to be commended for their efforts and have set a standard which will require heavy dedication to surpass next year.

Big Bad Bob

Bowra

After my usual visit to Liverpool this year on Saturday 29 September, I pressed on down south via the Southern Freeway to make my annual pilgrimage to the Southern Highlands capital of Bowral, arriving at 3.30pm to view the now infamous 'Trains at Tulip Time Model Railway Exhibition'. Of course, I am referring to the annual exhibition put on by the Berrima District

A.M.R.M. INDEXES

Indexes for Volumes 7, 8, 10, 11, 12 and 13 are available at a cost of a 43c stamp per singular order or 2 x 43c stamps for multiple indexes. To obtain these, send the stamp/stamps and a stamped (55c/60c) self addressed 95mm x 225mm or larger envelope to PO Box 345, Matraville, 2036, with a request detailing the indexes required.

The index for Volume 14 should be available in January 1991. Details of cost, etc., will be advised next issue.

EXHIBITIONS

Model Railway Club based at Moss Vale, with their club rooms located on the top floor of Ye Olde Moss Vale Railway Station.

I tried to sneak through the front door of the Bowral Public School where the exhibition, as usual, was being held, but was quickly collared by Club Secretary, Peter McGuire's 'Missus' who let me in for free, but rank has its privileges.

The exhibition this year was up to its usual high standard. Some ten layouts were on display, featuring EM scale, HOn2½ scale, N gauge and, of course, the ever popular HO scale replica modelling. The main theme of the majority of layouts was the modelling of the railways of New South Wales, along with some British, European and American narrow gauge outline.

Bob Hesse and Steve O'Brien operated Canberra Model Railway Club's *Forestbank* HO layout, which is based 'loosely' on the Liverpool Ranges setting of Ardglen. The detail was very good, with plenty of action. Garratts, 38s, 32s and 50 classes stole the show, but not until I saw superheated 25 class loco, 2531 (a Cowra engine), nicely weathered, haul no less than 14 bogie vehicles faultlessly around this great little layout. The 25 class was a Classic Brass import from Yulim of Seoul, Korea.

The next layout which took my attention was *Lulworth Cove*, a layout in EM gauge featuring British outline, based on the London and South Western Railway in the year 1912. This layout has been seen before, but never fails to attract plenty of attention, particularly as it includes synchronised tape commentary and train sound effects.

Visiting from Newcastle was N scale layout Newenga Junction exhibited by the Newcastle Model Railway Club. The detail on this layout was indeed very good, featuring typical NSW country environs. 44 class diesels and 620 railcars predominated.

There was a further N gauge layout presented by Doug Gray of Berrima District MRC, which featured popular European outline.

Whilst talking about 'little gauges', Gerry Hopkins' Kennebec County layout, an HOn2½ scale presentation of the North East - Maine - New England District of the US, was featured again this year, including sound effects such as 'cheeping birds' and the like - most amusing and always worth another look to find the many hidden things, so well detailed is this exhibit.

To cap things off, both NSWR layouts *Kareela* and *Goodetown* were linked together for through running of trains, over a total length of some 60' in the old measurements. *Goodetown* was constructed by the late esteemed Garry Goode and is a cross between the environs of Picton and Moss Vale and was operated by Gary's wife, Pauline and nephew, Craig Goode, whilst news to hand is that the layout has now been sold.

I tried avoiding AI Cutmore, as I do unsuccessfully every year, but, after looking at his latest contribution to modelling, L&C's TFX carriage sides, I shall have to be extra nice to him in the future.

I finished the day by dining with all the exhibitors, including all twenty visitors from the Corio Model Railway Club from Melbourne, a nice time being had by all at the Moss Vale Bowling/RSL Club. The Corio boys got away okay on the 10pm overnight Melbourne Express ex-Moss Vale, hauled by 81 class and V/Line G in the shafts. I didn't get to see the tulips, but who cares anyhow?!! I'll be there again next year.

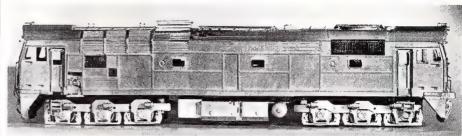
Big Bad Bob

Sydney - A Kiwi Perspective

A casual remark to me by lan Thorpe a few months back saw me alter my holiday plans so as to include a visit to the 1990 Sydney Exhibition. Having read of these Australian exhibitions for the past 10 years in AMRM, the opportunity was too good to miss.

Advertising for the event was good, a full page ad in 'the Aussie magazine', as it is affectionately known over here, and also reduced size copies of the same ad were available at the enquiry counter at Central Station. With the aid of the map in the advert, I had no trouble in finding the venue.

Having parted with my five dollars at the door, I did a quick tour around the main exhibition hall to get my



On display at the Sydney exhibition, Berg's Hobbies latest metal 80 class kit from The Model Company in New Zealand. Designed to run on mechanisms from K&M, North Yard or Powerline, the kit has been detailed to a higher standard than previously for the now extensive metal kits from Berg's. The kit will be available shortly.

bearings before settling in to enjoy the exhibits in more detail. AMRM were strategically located just inside the hall and it was good to renew acquaintance with some of the crew who came to NZ recently.

The main hall, which is the size of three basketball courts, was well set out with a balance of operating layouts and trade stands. While I was not in the market for any HO models (I model S scale), the range available to the Aussie modeller is incredible and the stands were doing good business. The standard of most layouts lived up to the reviews of them that had previously appeared in the AMRM and it was a treat to see them in the flesh.

One of the top layouts for me was *Alynvale*, for its scenery and the fact that something was always happening on the layout. Talking of operating, *Yarston* put on a good show (for the purist, at least) with small trains on a point-to-point layout running at scale speeds and performing some very prototypical shunting. After praising the *Knapsack Gully* layout, I found that it has been around the scene for about 15 years. This layout has dated well. I liked the Blue Mountains style backscene, having been touring up that way the previous week. Plenty of trains in operation made this a very popular layout for the public.

Other layouts that stood out were East Matelend, especially for its prototypical length trains, Trunkey Creek, Possum Flats and Pickedon.

Overall, I was impressed. The exhibition had a very strong Aussie flavour; I can only recall one American and very few British or European displays. Top non-Aussie layout was surely the English O scale shunting layout using three link chain couplings. Operators of most layouts were very friendly and would offer to set up a scene the moment a camera appeared out of a bag.

If you get the chance, make a point of getting along to next year's show.

Gavin Sowry

Mt Gambier

Mount Gambier is a city of 25,000 people situated in south eastern South Australia, a pleasant five hour drive from both Melbourne and Adelaide. The Blue Lake Model Railway Club Inc. runs the exhibition every second year, alternating with the large Adelaide exhibition. With reasonable proximity to two large cities, the BLMRC relies heavily upon layouts from both to build the standard of the exhibition to a high level. This is achieved by the use of sponsors, both locally and within the trade. The sponsor's name is not only published in the 12 page exhibition guide, but also displayed on the participating layout. Obviously, sponsorship works in Mt Gambier and the irony of Powerline sponsoring Laurie Green's award winning HOn3 *Rio Grande Southern* was not missed.

The large hall housed 23 exhibits, including the Canteen and Raffle stand. G, O, HO and N scales were represented, along with a number of commercial stands. The commercial displays included Box Car Hobbies, Baker & Cousins, Train World, Australian Railway Historical Society (SA Division), Edwardian Enterprises and a well run trading table. Like many recent exhibitions, there were some bargains to be had and some highly priced brass locomotives on offer.

The large scale scene was covered by Alistair Whibley's G scale *The Lizard, Goanna & Bandicoot*

Railroad which featured LGB, MDC and Playmobile equipment. A display of Mt Gambier's live steam models, steam and diesel, was a feature.

O scale was represented by Frank Sheeran's *Old Tinplate Trains*, featuring a wide selection from Meccano and other tinplate models. Ian Wade's *Neverwas Railroad* was a freelance display and featured models from many different countries.

The HO scene was prolific and included displays from host club Blue Lake Model Railway Club, Mount Barker Model Railway Club, Corio Model Railway Club and the South Australian Railway Modellers Association. Corio featured Australian trains, with a number of N class diesels and a third series G class. The others mixed foreign prototypes with the local prototype models. The hayshed scene on the SARMA layout may receive an 'X' rating, but was an exquisite piece of scenery detailing. The cluster of clothes alongside the naked bodies appeared very realistic.

The American scene was covered by the 1989 Adelaide award winning *Gold Hill Central*, which was built by Murray White and was a good example of what can be achieved with proprietary equipment in a small space.

Last in the HO group was the Adelaide Modellers Group's *Beltowrie*. How this display, which is as good as any other in Australia, deservedly winning the 'Best Layout Award' in Adelaide 1989, escaped being mentioned in either of the best layout or best club layout awards, is inconceivable. It features 1950s South Australian operation and, being based on SA's mid north and having two gauges, it portrays the break of gauge there. A short branchline has now been added to this impressive display, which allows point-to-point operation. It is understood that Gavin Thrum and the Adelaide Modellers Group will feature at Camberwell in 1991.

As previously mentioned, the HOn3 *Rio Grande Southern* appeared, with plenty of trains running over the spectacular scenery. RGS is also expected at Camberwell 1991.

The N scale scene was represented by the South Australian 'N' Gauge Society and Clinchfield. SANGS features N-Trak modules and US prototype, whilst Clinchfield is a coal carrying system situated in the Appalachian Mountains. At first it was surprising to see NSWR N scale stalwart, Phil Badger, running Clinchfield, and one instantly assumed he had abandoned the cause he has so energetically promoted in recent years. Naturally, this is not the case, his participation being as an operational assistant and he used the opportunity to display his latest work, an N scale etched brass S wagon, a kit he hopes to have on sale soon.

The attendance at the exhibition was marred by the Melbourne and Adelaide Aussie Rules Grand Finals, both competitions being closely followed by the locals. However, a good display of model railways was available for one and all to see.

The BLMRC should be proud of their 1990 exhibition and the hospitality extended from the 22 strong club to all exhibition workers. The Sunday evening social was a really enjoyable night, making the expense of a trip to SA worthwhile. As the club is moving to new premises in the near future, it will be interesting to visit again in 1992.

Bob Gallagher



Victorian Railways' T Class

Jim Leppitt delves into the Victorian T Class diesel electric locomotives.

Introduction

The T Class locomotives have played a prominent part in the operation of the railways in the state of Victoria since they were first introduced back in 1955. As they are being replaced by modern large horsepower locomotives, and subsequently withdrawn and scrapped, it was felt that an article was required which would give modellers information which would enable them to recognise the different features of the locomotives within this large class of 94 units (plus five H class). It is hoped that the following will do just that.

It is commonly and incorrectly assumed by many railfans and railway staff as well, that there are three series of T Class locos, 'Flat top' (T320 - T346), 'High Nose/High Cab' (T347 - T366) and 'Low nose' (T367 - T412). However, to cover the considerable variations within these groupings, it is better to refer to the batches of locos delivered under different contracts as described in this article.

All of the class were built by The Clyde Engineering Co. Pty Ltd at their Granville, New South Wales plant. After running trials on the New South Wales railways each unit was delivered to Victoria on standard gauge bogies via the standard gauge to Albury and then either bogie exchanged for the broad gauge to Melbourne or, after 1961, continued on the new Victorian standard gauge.

The H Class locomotives have also been included as they are almost externally identical to the later members of the T Class.

Throughout these notes references are made to locomotives which have certain features, or have had modifications made, and although these have been confirmed the lists may not be complete. These unit numbers should be taken as examples only. Should you wish to model a particular member of the class, then research would need to be undertaken to ensure that details are correct for the period intended.

T320 - T346 Specifications

Contract No. 58739.

27 units. Model G8B. 875hp. EMD 567C: V8 EMD D15 Generator. 4 x EMD D19 Traction Motors.

T320 entered service: 1/8/1955. T346 entered service: 23/12/1956.

The units within this group are commonly known or referred to as 'Flat Tops'.

Distinguishing Features

When delivered, T320-T333 had controls on the left side of the cab (short hood leading), but were subsequently changed over to the right side to conform with the remainder of the group.

Exhaust stacks were not fitted originally to this group, they only had twin exhaust ports situated in the top of the long hood. Twin stacks were fitted to T327 as an experiment during October 1957 but were found to be excessively noisy and were replaced by a single stack. The remainder of the group were also fitted with the single stacks. Some units appear to have had a tall round stack fitted at first but later changed to the standard style with a flatter shape.

This group has 26'6" bogie centres, longer than other members of the class.

T320 - T325 were fitted with fabricated welded bogies with 13'0" centres.

T326 - T346 fitted with cast bogies with 16'0" centres. T320 - T325 could be fitted with cast bogies (T325 has been sighted with one of each) but the remainder cannot in turn be fitted with the fabricated style. Sand boxes mounted on bogie sideframes (4 per bogie). Single brake cylinder on each sideframe mounted facing the left.

Westinghouse two-tone horns mounted on cab roof with one trumpet facing each direction.

T320 - T346 were fitted with brass number plates (as were all B & S class and Y101-150). Until the early 1960s the characters were polished with a blue background but due to their propensity to tarnish and lose contrast with the



T354 in April 1964 is fitted with oval exhaust, cast bogies with holes and has the short wide radiator grills. Graham Ball photo.

Page 34. Australian MODEL RAILWAY Magazine. December 1990.

Right: T332 at Bendigo in April 1964 before the demise of steam. Showing eight years of service it is weathered and has plain cast bogies fitted with sandboxes, small round exhaust, barred cab windows and the short square radiator grill. Graham Ball photo.

Below Right: T368, a T class with full height radiator grills, the left hand side having four/three step cutouts, plate bogies with holes, staff exchanger opening and oval exhaust. Photographed by Graham Ball in December 1979 at Spencer Street.

background, this was changed to white characters on a black background. Small grilles with horizontal bars were mounted externally over the fixed cabside windows to protect them from breakage during hand staff exchanges.

Modifications

Following complaints from shunters during the 1950s, the coupler lift bars were extended outwards. This necessitated the fitting of a small plate welded to the side of the step to act as a stop. Also at the same time the angle on the step handrails was slightly changed.

T331 fitted with RVB model SV/53 three-tone horn approximately 6 months prior to withdrawal for conversion to P Class.

T332 was overhauled and returned to service 4/12/1976 with following modifications:

- Hurricane RVB model SV/53 three-tone horn.
- Later style tapered exhaust stack
- More prominent sealed beam headlight housings.

T338 was also fitted with more prominent sealed beam headlight housings.

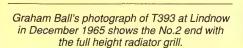
T328, T338 and T341 were also fitted with later style tapered exhaust stack.

T333 was fitted with a 'home made' pilot on the short hood end which was a flat plate with a shallow V of 1.5 inch 'L' shape steel under the coupler. This was replaced by a standard pilot during overhaul.

Beclawat aluminium framed cab windows were fitted (see status table). Cut away side valance (reduced depth): (The status table, will be included with the second part of the article, in the February 1991 issue. - Editor)

Paint Schemes

Delivered in standard VR blue and yellow. T320 and T321 had different thicknesses of the yellow band on the hood sides when new, 2" and 5" respectively. While in for a B exam on 16/2/1956 the band on T320 was repainted to the standard 9" width. The band on T321 was also







Australian MODEL RAILWAY Magazine. December 1990. Page 35.





T343 at South Dynon loco in July 1964 is in original condition with side cab window grilles, builder's plate and polished brass number plates all visible. V/line photo.



T393 at Geelong Loco on 27/1/90. This is the only unit of the Low Nose style to receive Beclawat cab windows. It has also been fitted with bullet proof windscreens, which are evident by the thick black surrounds with visible bolt heads.

Left: T320 in Wodonga yard in July 1955 after bogie exchange to 5'3" gauge at Bandiana Army depot during its delivery from Clyde's Granville (NSW) plant. Note the 2" yellow band which was not repainted to the standard 9" width until 16 February 1956. Also of interest are the front handrails and coupler lift bars as originally fitted. This was the first of six units (T320 - T325) to be fitted with fabricated welded bogies. As delivered this locomotive was not fitted with an exhaust stack. V/Line photograph.

repainted to the standard width about this time.

None of this group received the V/Line scheme.

T334 painted pink all over with Ozride motifs for use in filming work (July 1986). Subsequently transferred to Australian Paper Manufactures for use on their private line at Maryvale, Victoria. It has since returned to V/Line.

T342 was also transferred to APM but returned to V/Line and painted in an all over yellow scheme with black trim at Bendigo North workshops. Outshopped on 18/2/88 and returned to APM. Replaced at APM by a Y Class loco and returned to V/Line 1/9/89.

T347 - T356

Specifications

Contract No. 61306.

10 units. Model G8B. 875hp. EMD 567CR: V8 EMD D15E Generator. 4 x EMD D29 Traction Motors.

T347 entered service: 22/6/1959. T356 entered service: 14/12/1959

Commonly known or referred to as 'High Cabs' or 'High Nose' Ts.

Distinguishing Features

Full height cab, body similar to Flat Top but shorter, no walkway at end of long hood. Side radiator grills (cooling air intakes) half panel only on driver's side. It is worth noting that the original proposal for this group included a Flat Top style cab.

Single transverse exhaust stack, narrow and straight, originally fitted.

Shorter 22'8" bogie centres than earlier units fitted to these and all remaining members of the class.

The bogies are of the cast, plain (no small holes in sideframes) type with no sandboxes, and single brake cylinder facing left.

The horn is an RVB three-chime type, mounted in the centre of the 45 degree mansard section between the roof and the side of the long hood. They are fitted with brass number plates refer T320 - T346 group. Cab side window grilles also fitted to this group as for T320 - T346.

Modifications

Removal of fillet plates at base of cab on running board commenced mid 1960s.

Beclawat aluminium frame cab windows fitted during overhaul and repaint to V/Line scheme: see status table.

Cut away side valance (Note: There are three different styles of cut out); see status table.

Paint Schemes

All were delivered in VR blue and yellow scheme. Some within the group were painted in V/Line scheme.

T357 - T366

Specifications

Contract No. 61864.

10 units. Model G8B. 875hp. EMD 567CR: V8 EMD D25E Generator. 4 x EMD D29 Traction Motors.

T357 entered service: 14/12/1961. T366 entered service: 21/5/1962.

Also commonly known as 'High Cabs' or 'High Nose' Ts.

Distinguishing Features

The loco body has a full height cab but hoods different because of vertically mounted radiator cores due to altered radiator configuration. The air intakes on side of long hood full height. Three step recesses cut into intake for access to hood roof on fireman's side only. Smaller intake on hood top.

Single transverse exhaust stack, with oblong and tapered shroud originally fitted.

Cast bogies fitted with 4 small holes in each sideframe, no sand boxes. Also fitted with RVB three-chime horn mounted flat on top of long hood.

The grilles over the cab side windows on this and all subsequent groups were changed so that the bars have a vertical format.

Modifications

Removal of fillet plates at base of cab on running board commenced mid 1960s.

Beclawat aluminium frame cab windows fitted during overhaul and repaint to V/Line scheme: see status table.

Cut away side valance (Note: There are three different styles of cut out); see status table.

T360

Rebuilt by Clyde Engineering Co. Granville, following an accident on 12/3/1970 when it collided head on with T396 in Portland yard. This unit was subsequently returned to service on 27/1/71 fitted with a low short hood and rebuilt cab identical to T367 onwards, and an EMD 645E engine.

Paint Schemes

All delivered in VR blue and yellow scheme. Some units within group painted in V/Line scheme.

T367 - T386

Specifications

Contract No. 62356.
20 units. Model G8B. 875hp.
EMD 567CR: V8 EMD D25E Generator.
4 x EMD D29 Traction Motors.

T367 entered service: 10/2/1964. T386 entered service: 26/11/1964.

Commonly known or referred to as 'Chopped Nose' or 'Low Nose'.

Distinguishing Features

Body similar to the T357 - T366 group, but with low sloping short hood and reduced depth of side valance. The headlight is mounted on the hood but the illuminated number boards are located above the forward cab windows. The fuel tank and battery box on this and all further units is of a different shape to that fitted to all previously built units.

Modifications - T384

T384 was involved in a serious accident on June 30, 1977 when it collided with a loaded semi trailer at a level crossing on the outskirts of Mount Gambier. The force of the impact was taken by the short hood and cab, which were seriously damaged.

It was towed to South Dynon Loco on 8/7/77, then forwarded to Newport Workshops for repair. When returned to service on 23/12/77 the following changes had been made:

- The short hood was rebuilt not only lower but the slope was increased. The height from the running board to the top of the nose at the cab is 61" and at the front 54", in lieu of 64" and 58" respectively on other units. The electrical cabinet doors in both sides of the hood are also 4" shorter.
- The changes to the hood have also caused the front windscreens to be mounted lower.
 This is noticeable by the space between the top of the windscreens and illuminated number boxes which is not on other units.



T407 at South Dynon loco on its first day of service, 27 September 1968 after delivery from Clyde Engineering. The staff exchanger recesses in the cab sides were never fitted with equipment. V/Line photo.

- Single drop cab side windows in lieu of double sliding type. Builder's plate mounted below the number plate on the cabside. No small handrail under the headlight on the front of the hood.
- Although the top of the short hood was painted yellow, the yellow did not continue down to the sides of the hood.

Refer to Page 55 of April 1979 *Newsrail* for a photo of the rebuilt unit in the VR blue and yellow paint scheme.

Paint Schemes

All delivered in VR blue and yellow scheme. Some within the group were painted in V/Line scheme.

T387 - T396

Specifications
Contract No. 62686.

10 units. Model G8B. 875hp. EMD 567CR: V8 EMD D25E Generator. 4 x EMD D29 Traction Motors.

T387 entered service: 4/9/1965. T396 entered service: 23/12/1965. Commonly known or referred to as 'Chopped Nose' or 'Low Nose'.

Distinguishing Features

The loco body is the same as the T367 - T386 group.

Modifications

Beclawat aluminium frame cab windows fitted to one unit during overhaul and repaint to V/Line scheme: see status table.

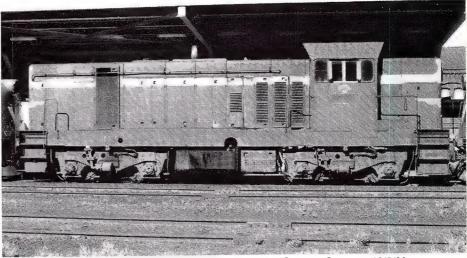
Paint Schemes

All delivered in VR blue and yellow scheme. Some within the group were painted in the V/Line scheme.

More overpage

Next Issue

Jim Leppitt's article on the Victorian T Class will conclude in the February 1991 issue. Coverage will include the H and P class along with numerous detailing photographs. Information will also be supplied on D1/T413 and some of the most recent liveries, as well as a 1990 T Class Status Table.



T366 in blue and gold VR scheme as stored at Spencer Street on 18/2/90.

T397 - T406

Contract No. 62963. 10 units/2 variations.

T397 - T398 Specifications

Model G8B 875hp. EMD 567CR: V8. EMD D25E Generator. 4 x EMD D29 Traction Motors.

T399 - T406 Specifications

1050hp. Model G18B. 8 units EMD 645E : V8. EMD D25E Generator. 4 x EMD D29 Traction Motors.

T397 entered service: 3/12/1966. T399 entered service: 1/4/1967. T406 entered service: 13/7/1967.

Commonly known or referred to as 'Chopped Nose' or 'Low Nose'.

Distinguishing Features

The body was the same as the T387 - T396 group; however T399 - T406 were fitted with larger capacity and the more powerful 645E engine which has a small inspection porthole on body for oil bath type blower filters above handbrake and partly behind handrail.

When delivered the 645E engined units had twin transverse mounted tapered exhaust stacks, but these were found to be excessively noisy. The exhaust system was modified and a single stack substituted in the original position furthest from the cab. All locomotives were modified by early 1968.

Paint Schemes

All were delivered in the VR blue and yellow scheme. Some within the group were painted in the V/Line scheme.

T400 was fitted with the necessary connections to provide head-end power to carriages for use on Commissioner's inspection and school trains. This modification was carried out after the equipment was removed from the previously used Y175, and entailed the removal of the staff exchanger recesses on the cab sides to accommodate the switchgear within the cab. This equipment was later removed and fitted to T412.

Similar equipment was also fitted to T406.



Specifications

Contract No. 63219. 6 units Model G18B.

1050hp. (part of contract for 11 units - see H Class) EMD 645E: V8 EMD D25E Generator. 4 x EMD D29 Traction Motors.

T407 entered service: 27/9/1968. T412 entered service: 25/11/1968.

Commonly known or referred to as 'Chopped Nose' or 'Low Nose'.

Distinguishing Features

Locomotive body the same as T399 - T406 and was also fitted with the larger capacity and more powerful 645E engine.

When delivered all had single transverse mounted exhaust stacks.

Modifications

T409 was overhauled in April 1989 and returned to service fitted with bulletproof self demisting windscreens, the first unit to be so fitted.

Paint Schemes

All were delivered in the VR blue and yellow scheme. All within the group are now painted in the V/Line scheme.

To be continued next issue.





V/Line grey and orange livery is prominent in this photo of T410 and T391 at Bairnsdale in April 1985. Graham Ball photo.

T321 at Seymour in April 1984 is extensively modified with a cutaway valance, bar bogies fitted with sandboxes, Beclawat windows and a round exhaust. Graham Ball photograph.



Page 38. Australian MODEL RAILWAY Magazine. December 1990.

MODELLING THE S008 GRAIN SILO

Introduction

The S008 concrete silo, being the smallest Grain Corp. silo, was an ideal structure to adopt as a modelling project for two reasons. Firstly, as a model, it covers a ground space of 345mm long by 185mm wide, not a large area by any means. Secondly, the S008 silo is the basis for both the S016 and S024 silos, both of which will be discussed at a later date. Many other concrete vertical silos can also be constructed using the same methods of construction used to build this silo.

Prototype

The S008, as was mentioned in issue 164 of AMRM, is an 800 tonne (30,000 bushel) silo. It has 12 storage bins, the four main bins forming the basic shape of the silo. These bins have a 14'0" (4.27m) internal diameter, with a concrete wall thickness of 6" (152mm). The silo is 64'0" (19.5m) high to the top of the bins, and 91'9" (27.96m) overall.

There were 16 of these silos built between 1928 and 1934 and they were spread far and wide all over the State. One of these locations was West Tamworth, the silo being concentrated on in this article. The silo at West Tamworth was built in 1934 and is located on the down siding in the Tamworth industrial area, directly opposite West Tamworth station.

Operation

Grain is brought by road to the silo where a sample is taken. This sample is checked and graded. The grain is then weighed and dumped into the receival hopper, where it falls to the bottom of the silo. The grain is then lifted by bucketed conveyor to the top of the silo where it is directed to a storage location. The grain is stored until it is to be transported to either a sub-terminal, mill or the seaboard ter-

The grain can be transported away by either road or rail. If transported by rail, the grain is dumped to the bottom of the silo, lifted by bucketed conveyor to the top of the silo and redirected to the outloader and loaded into rail wagons. If it is to be transported by road, the same process applies, except that the grain is redirected to the trucking out chute in the wagon shed, and loaded into trucks.

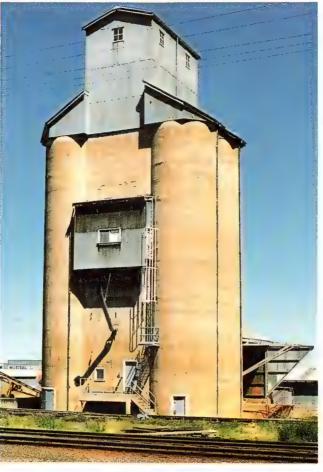
Variations

Not all S008 silos are identical; sure, their shape is similar but externally they can differ greatly. The following list contains a few of the major variations:

- Cupola window types.
- Scale platform annexe (in place or removed).
- Bin door, window and vent locations. Receival hopper style.
- Outloading chute & front ladder variations.
- Weighbridge (internal or external).
- Wagon shed variations.
- Drainage system.
- Roof and trim colour.

With all the variations that are listed, it is

Top of Page: West Tamworth's S008 grain silo. The ground level of this silo is lower than rail level, requiring substantial drainage, and a higher than normal location for the outloader platform. Bob Gallagher photo.



essential that photographs and measurements be taken if you are going to model a specific silo. This was the case with West Tamworth, where many photos were taken for detail purposes.

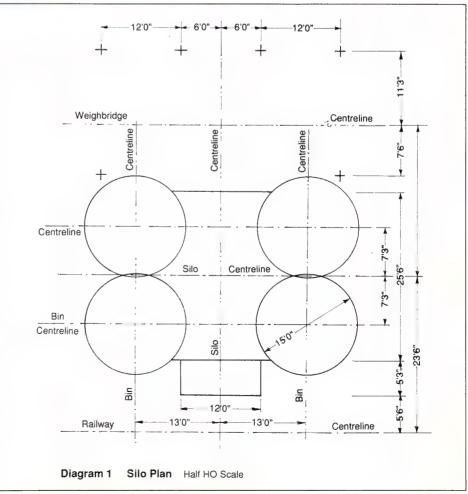
The Model

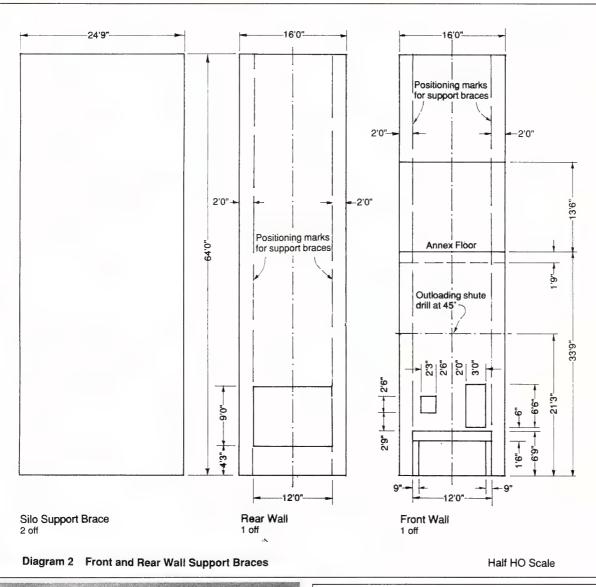
Whilst keeping in mind the variations previously listed, the silo at West Tamworth has the following:

- Scale platform annexe (in place)
- An internal weighbridge in the receival hopper
- Standard centre-pivot cupola windows
- Right-hand wing of wagon shed removed to accommodate semitrailers.
- Steps on the right hand end of the outloading platform with a handrail all around the platform.
- The silo base is approximately 3'0" (0.91m) under the rail height, with the drainage falling to the right.
- Small platform just up from the outloading platform toward the annexe.

All of these variations were taken into account when building the model.

The basis for any building is a good solid foundation. There is no difference here. I build all my structures onto a 10mm Craftwood baseboard, which is later located onto the main layout baseboard. Scenery material is then sprinkled around to camouflage the edges. All measurements listed in the text are in HO scale unless otherwise







The northern elevation of West Tamworth's S008 grain silo shows both rail and road access. The road truck delivers the grain from the south, the grain sampling stand being visible of the southern approaches. West Tamworth's silo is one of sixteen in NSW, a full listing can be found in the October 1990 issue. Bob Gallagher photo.

		Table 1		
Bin 1	3" from base	3' wide	6'6" high	Single Door
Bin 2	9" from base	5'9" wide	6'9" high	Double Door
Bin 3	9" from base	3' wide	6'6" high	Single Door
Bin 4	1'6" from base	3' wide	6'6" high	Single Door
			•	-

stated. When relating to the left, right, front and rear of the silo, all directions are taken looking at the silo from the rail side.

Sub-Structure - The Bins

The four main bins are cut from standard grey 50mm electrical conduit. They need to be cut 64' long and have both ends square. The best way of cutting the conduit and achieving square ends is to cut and machine the conduit in a lathe (if one possesses a lathe). Another method of cutting the conduit and squaring the ends is to use a piston ring compressor. By placing the ring compressor over the conduit and tightening it, with the ends flush, a square end will be achieved by cutting with a fine razor saw and sanding the ends. If all else fails, go down to the local engineering shop and, after hearing the machine operator say "You want them for WHAT!!", convince him that you do intend to pay for cleaning up the lathe after he

machines the conduit. (It does make one hell of a mess!)

Of course, the easy way out is to purchase pre-cut conduit from the author. (To encourage modellers to construct a silo or two, the author is supplying material kits, details of which are described at the bottom of this page. - Editor)

The next step is to locate the holes in the conduit for the doors and window. Refer to Table 1 and Diagram 3 for door positions.

The window in bin 3 has its centreline 4' toward the weighbridge (right side of door) from the door centreline. The window is 2'6" high and 2'3" wide, with the top opening of the door. The positioning of the doors will be discussed later when fitting the bins.

The cutting out of the door holes is best done with a small circular saw blade in a high speed tool (Dremel), leaving the edges to be cleaned up with a file. Drilling the holes out and then cleaning up the edges with a fine file is another method of achieving the same result, especially with the win-

dow. When cleaning up the edges with a file, try to attain a parallel opening, minimising the need to fill the gaps later on. Set the bins aside until needed. Make sure safety glasses are worn when using any high speed tool.

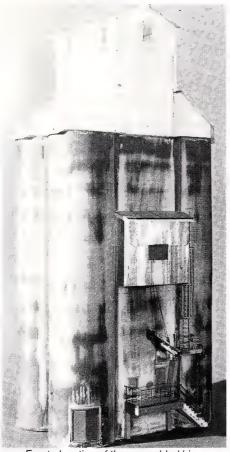
Sub-Structure - Silo Sub-Frame

The sub-frame is the structure that the bins are fitted and glued to, making up the sub-structure. The sub-frame consists of the front and rear walls and two support braces, as in Diagram 2, and the top and base pieces, as in Diagram 3. All pieces are cut from 0.040" styrene sheet.

The rear wall has an opening cut into it for the workhouse rear door, and the front wall has two holes cut into it, for the door and window at the outloading platform. A 3/16" hole is also drilled for the outloading chute. Both the front and rear walls should be marked 2' in from the sides on the insides of the pieces. This is where the two

Materials and Parts

Components for the construction of the S008 silo are available from Keiran Ryan Models, PO Box 80, Kogarah, 2217. The kits of epoxy detailing castings which includes door, windows and weigh bridge/receival hopper grate, etc. costs \$30.00 including postage. The set of pre-cut, square to length plastic silo tubes is available for \$15.00.



Front elevation of the assembled bins.

support braces are located and glued. To assist in assembly, strips of 6" x 12" styrene should be glued to the walls on the outside of the mark, and the support braces glued to the strips and the walls. These strips also aid in strengthening the structure. Make sure the front and rear walls also have centreline marks, to help in locating them

squarely onto the top and base

pieces.

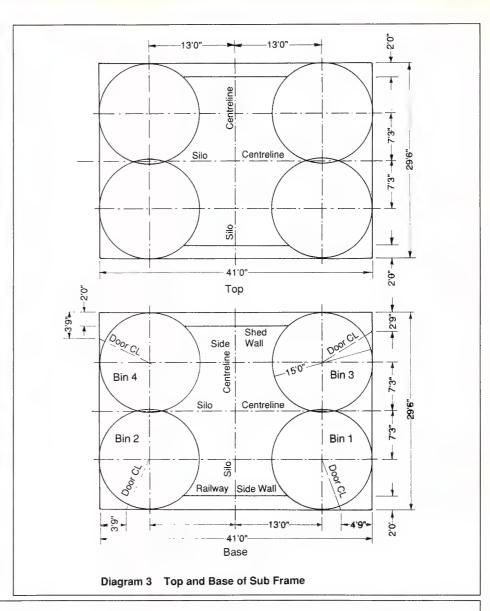
The top and base pieces are cut from 0.040" styrene. All lines marked in Diagram 3 should be placed onto the styrene. The top piece should also have centrelines marked on the upper side to assist in locating the cupola squarely. The door centrelines only need to be placed on the base piece. The position of the door centrelines came from the original plans. Not all S008 silos have the doors in exactly the same location, as modifications have occurred, so photos and measurements can come in handy here.

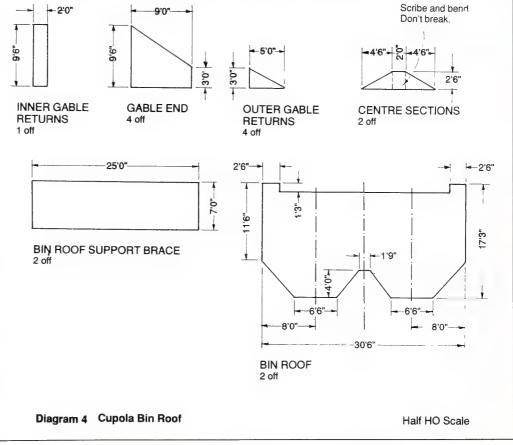
By using the marks, locate the sub-frame on the base and glue it in place, squaring it up before the glue dries. Repeat the process with the top piece and set aside to dry

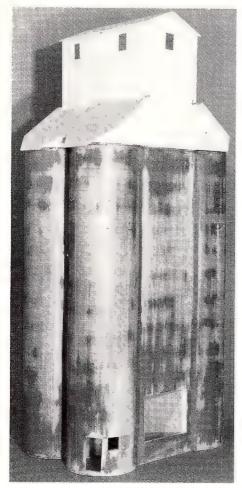
Sub-Structure - Construction

Now that the glue has dried on the sub-frame, we can locate the bins to form the sub-structure. Dry fit the bins first to make sure that they fit. If they don't fit, go to jail, go directly to jail, do not pass go and do not collect \$200, but do start again, because you erred. However, if no problems exist, fit the bins in the following manner, method, way

Starting with bin 1, place the bin hard up against the edge of the front wall of the sub-frame; at the same time, the outer edges of the bin should be flush with the outer edges







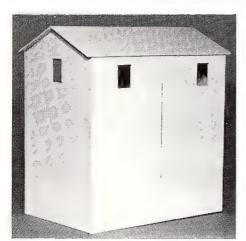
Rear view of the assembled bins. The cut-outs for the door, window and work area is clearly shown.

of the top and base of the sub-frame. When you're happy that this has been achieved, just twist the bin until the door hole lines up with the door centreline mark on the base. When all three positions line up, run styrene glue (Testors or MEK) down the joints and around the bin, adjusting the bin as the glue dries.

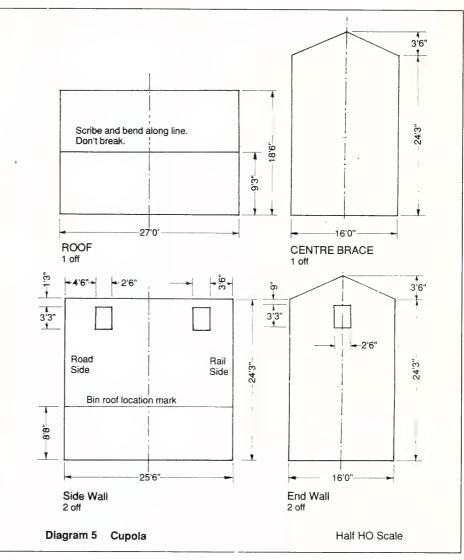
This procedure should be repeated with bins 2, 3 and 4, making sure no gaps exist between the walls and that the bins are flush with the edges of the base and top pieces.

When all bins are positioned correctly, a gap of approximately 12" should be present between the bins on the sides of the sub-structure. This gap will be filled later. The excess styrene on the top and base can now be removed and the top and bottom edges sanded smooth.

To fill all the joints and gaps, I use Selley's



The cupola, after being cut out and assembled from styrene sheet.



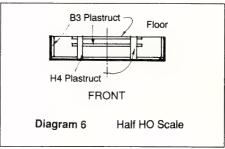
Automotive Body Filler, which is available at any auto parts shop. The filler is mixed with a hardener and, when hard, is sanded smooth. To obtain a smooth radius when filling the gap between the bins, use a smooth piece of brass, steel or plastic rod about 1/4" in diameter. The same method is used for the joints between the bins and the wall edges, except that a 5/8" rod is used. By placing the filler in the joint (excess) and dragging the rod through the filler at about 45°, a fairly smooth surface is the result. Any extra filler squeezed out when dragging the rod can be cleaned up wet or just as it goes off. Make sure you remove all excess before it is allowed to go hard. When the filler sets, sand all joints with wet and dry paper, using water as a lubricant. Any pit marks or holes can be filled with Automotive Stop Putty or Tamiya Putty and re-sanded. Before applying any filler, make sure the surfaces required to adhere to the filler are roughed up with coarse sandpaper. This allows a better surface for the filler to adhere to.

Cupola

Cut all pieces for the cupola as indicated in Diagram 5 from 0.040" styrene, making sure all window holes, locating and centreline marks are in place.

When assembling the sides and ends, ensure the window holes that are closest to the ends are at the same end. The cupola is assembled with the ends glued inside the side pieces. When locating the roof, don't break the roof into two pieces, just bend along the scribe line and form the roof over the cupola.

A strip of styrene, 6" x 4", should be glued just above the mark on the side of the cupola. This strip supports the bin roof. At this point, measure 1'3" in from the sides at both ends and place a



mark on the ends. This will help in locating the inner gable returns. When the glue is dry, fit the cupola to the sub-structure, making sure the end with the window holes closer to it, goes towards the front (rail side) of the silo. When fitting the cupola, align it on the centreline marks on the sub-structure. Adjust the cupola as the glue dries.

Bin Roof

The following pieces should be cut for the bin roof, as indicated in Diagram 4: two roof pieces, two braces, four gable ends, four inner gable returns, four outer gable returns and two centre section pieces.

Place the bin roof on the locating strip on the cupola side. Glue the roof to the cupola side and the top of the bins. Locate the brace piece inside the roof at approximately 90° to the roof with the other edge of the brace glued to the joint where the cupola joins the sub-structure.

Place the inner gable return just inside the mark on the end of the cupola, and glue into position to the cupola on the top edge of the bin roof, ensuring the inner gable return doesn't extend below the cupola. Locate the gable end

against the roof and flush with the outer edge of the bin. Try to maintain the same gap all round the edge of the roof. Glue the outer gable return in a similar manner to the gable end. The other gable ends and gable returns are done in the same way, leaving only the centre sections. These pieces should be scribed so that the outer tips bend forward, then they are glued into position in a similar fashion to the other pieces (just a touch more fiddly).

Scale Platform Annexe

Cut all pieces as per Diagram 7. You should have the front and rear walls, two end walls, one centre brace, floor and roof.

Cut the hole out of the front wall (for the

window), the scallop out of the centre brace and the hole out of the right hand end wall (for the door).

Locate the floor piece centrally 2' from the base of the front wall. Glue the centre brace to the floor and front wall, making sure that the centre brace is flush with the top of the wall. Trimming the floor may be necessary to locate

Selecting a Silo -

In studying the prototype with a view to selecting a grain silo for the layout we must look at the reason for the silo. Is it for show only? Will it be used as part of an operational plan. Will this operating plan require extensive shunting to load the wagons?

The latter is considered the requirement when looking at the examples in this issue, both on the line north west out of Werris Creek.

Curlewis

The first location under the spotlight is Curlewis, a small town 48 km from Werris Creek. It has a loop road and a goods road where the goods shed and grain shed are located. The silo road is of reasonable length.

The trip train from Werris Creek, running tender first, would enter the loop, the engine detach and run back via the mainline to the Werris Creek end of the yard. The brake van would be detached and pushed into the goods shed road. The wheat trucks would then be pulled out of the loop

and pushed up the silo road to the outloader of the S027 silo. The engine would return to the goods shed to await completion of loading. When completed, the engine would pick up loaded trucks, pull them out of the silo road into the Watermark section, then push back onto the brake van making the train complete to await departure

back to Werris Creek.

Breeza

But what would be the case, as in modelling circumstances, if the silo road was too short to accept the full train of empties? An example of this is Breeza, just down the road from Curlewis. Breeza is 22 kms from Werris Creek and has a loop adjacent the station on the mainline, a silo road north of the station and a goods shed/grain shed road south west of the station. Here a trip train would run tender first out from Werris Creek, with the string of empty 'bulks' in tow. With the storage in the silo sidings being restricted, the train on the main line would stop short of the silo points. After detaching, the engine would run round the train via the loop to the Werris Creek end of the train and push the empty wagons into the silo road as far as the loading bins.

The engine, along with brake van and the surplus empty wagons too long for the siding, would pull back clear of the mainline and stand in the goods shed road until the loading was complete, permitting the passing of other trains on the main line. The empty wagons in the silo road would be loaded and run down to the end of silo siding. The remaining empty wagons would then be pushed into the silo road as far as the loading bins, with the loco and van returning to the goods shed road. The newly placed empties would be loaded and run down onto the other loaded wagons.

With loading complete, the brake van would be pushed to the Gunnedah end of the mainline and left while the engine returned to the silo road and picked up the loaded wagons. These would be pulled out of the silo road and pushed back onto the brake van completing the train. It would then return to Werris Creek.

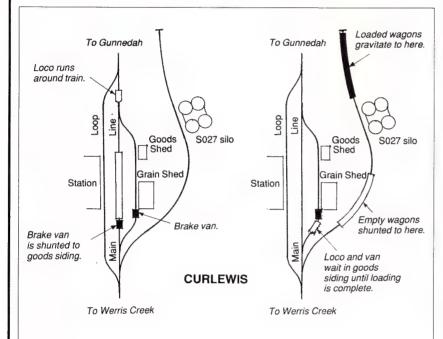
Modelling Comment

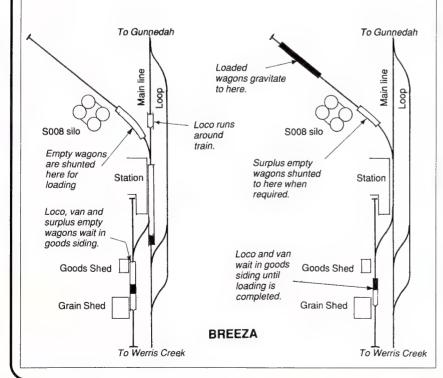
Both Breeza and Curlewis have yards that suit modelling purposes. With a capacity of 3,500 tonne, Breeza outshipped 2751 tonne of wheat, mainly Australian standard hard wheat, in 1985-86, from the S008 based silo. Total movement of this would require 115 RU hoppers.

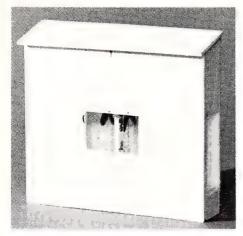
Curlewis, with an S027 and a C type depot has a capacity of 31,300 tonne and outshipped 15,995 tonne during 1985-86, most of which was general purpose and feed wheat. A substantial load for 347 BWH hoppers.

The model operation at both locations would be very interesting, and sufficiently involved for a weekly grain train. Larger silos within station yards, like Quirindi and Gunnedah offer different operational needs. We will cover these next issue.

This article was compiled by Bob Gallagher from information supplied by Ray Love and Bruce Griffey.







The assembled scale platform annexe.

Modelling the S008 Silo

Continued from previous page.

the two end walls, allowing them to come flush with the front wall. Locate the rear wall flush with the floor and upper edges of the end walls. The roof should be located centrally with the back edge flush with the rear wall.

Trim the roof so that there is 0.5mm overhang on both ends, just enough so that when the annexe is clad the barge boards just sit flush against the cladding.

Glue Plastruct girders and place under the scale platform, as per Diagram 6. These represent the scale platform support beams.

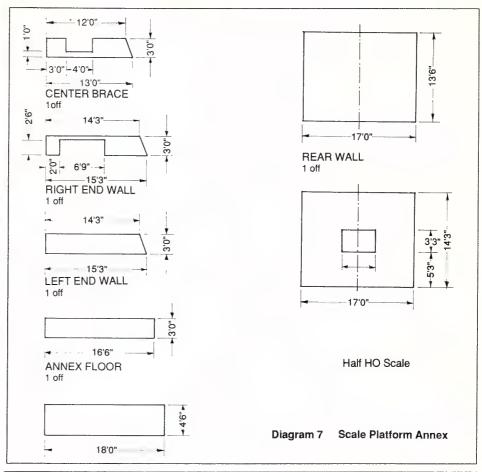
The annexe is 17' wide and the front wall of the silo is 16' across, which means 12" has to be trimmed off somewhere. Actually, the back corners of the annexe can be chamfered to fit the silo wall

Measure 34' from the silo base up the front wall and mark the spot. This is the position of the annexe floor. Place the annexe in position and put a mark on the silo wall, corresponding with the top of the annexe roof. Remove the body filler between this mark and the floor mark and trim the annexe corners until a neat flush fit is achieved. (Don't remove too much material off the roof as it stands out if a gap is left.)

With the annexe in place, drill three 3mm holes (anywhere) in the front of the annexe through to the silo wall. These holes are locating holes so make sure the annexe is held tightly and in the correct position when drilling. Use 3mm styrene tubing or rod as locating dowels. They will not be seen as the cladding will cover them

Part 2

Covering the construction of the base, out-loading platform, wagon shed and the cladding of the shed, Part 2 will be published next issue.



THE MAN WITH THREE HATS

A friend who happened to call as I was typing an article wanted to know if I kept my thoughts straight according to which hat I wore at the time.

So I'll tell you of my three hats.

The first is a blue denim peaked cap my daughter made many years ago in sewing class at high school. It is not unlike an engine driver's cap so she gave it to me to wear ... when you are running your trains, Dad. The front is adorned with the woven badge of the Ballarat and District Model Railway Club (Inc.) of which I happen to be a founding member and also have the honour of being a Life Member.

Many of the articles I write for AMRM are because I remember when trains were TRAINS of 10% iron and 90% man and the tail end of the period when the horse was still King of the Road.

Which leads me to my second hat, a broadbrimmed one - the one I wear when I ride or drive my equine friends. It is from my memories and personal experiences or riding and driving I describe the detailing of steam/horse era layouts.

And my third hat is a paint smeared beret I wear at my trade of coachbuilding. I build all manner of hand carts and barrows and all manner of vehicles drawn by animals, especially horses. Other branches of my trade are railway coachbuilders, tramway coachbuilders and motor car and coachbuilders.

I write articles for newspapers on how the horse was used in everyday life, technical articles on coachbuilding and I suppose you've read my writings on model and real railways.

Although at the present my own 9m x 3.3m (30' x 11') layout is stored while I build a new workshop and fit it out, as soon as the business is up and running I shall build another place to house and set up the layout.

Happy hobbying.

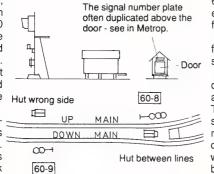
Lindsay G. Collins

Signal Huts

Greg Morris

The following notes may help users of Scaleways Relay Huts, which were reviewed in the October, 1990 issue. These were usually placed behind the signal they served. The door seems almost invariably at the end furthest away from the signal.

Two adjacent signals on double lines often share a relay hut. The hut is sometimes on the side of the track



opposite that of its signal. At Bullaburra, the number plate atted above the n Metrop.

opposite that of its signal. At Bullaburra, the 60-8 hut is in the six foot at the end of the station island platform ramp.

Out near Blacktown on the four roads, parallel signals share huts.

On double lines, adjacent opposite facing signals may also frequently share a hut. This pattern is mainly associated with colour light signals. Country upper quadrants usually had wooden buff coloured cupboards.

Diary of the Bicentennial Train

The Bicentennial Train, headed by 3801, visited all mainland states during 1988. In 1988, it was the highlight of the railway year.

Tony Gogarty accompanied the Bicentennial Train as its maintenance manager, being responsible for the maintenance and servicing of 3801 and its accompanying carriages. One of Tony's regular tasks was to record the daily events around 3801 on its journey around Australia.

These notes have been put together by noted railway writer Ron Preston. Along with numerous photographs, many in colour, **The Diary of the Bicentennial Train** is interesting reading.

Available in soft or hard cover it is on sale now at your local AMRM stockist, or available direct from AMRM at \$24.95 or \$29.95.

Ordering details can be found on page 84.



STEAM LOCOMOTIVE DEPOTS IN NSW

by Ray Love

One of the most important locations on a steam era model railway is 'loco' - the area where the engines are serviced, repaired and stored, awaiting their next duty. But what is a loco depot? What are the basic facilities required? Ray Love answered some of these questions during his presentations at the SCMRA Seminar and the Modelling the Railways of NSW Convention. Following is a transcript of some of those presentations.

Definition

As defined by the railway administration and the applicable unions, a 'locomotive depot' is a location where there are men employed. In some locations, this 'depot' also has locomotives on allocation, and generally there are servicing facilities, such as locomotive sheds, pits, turntables and coal stages.

It is conceded, though, that in general conversation and description, a depot is 'the place

where locomotives hang out', and it is in that sense that it is used here.

Styles

Basically, there are (or were) three styles of locomotive depot in NSW.

- Straight-through type shed
- Roundhouse-type shed (various styles and configuration of structure)
- 3. No locomotive shed at all.

These three basic forms applied in all periods of early steam, later steam, steam/diesel mix, early and modern diesel, branchlines, rail motors, railcars, etc.

The provision (or lack of provision) of a shed was usually combined with the following servicing facilities:

- 1. Turntable
- Ash pit
- 3. Inspection pit
- Water columns

- 5. Water tanks (various styles)
- 6. Coal stage
- Crew facilities such as meal rooms, barracks, shower room, kitchen, etc. sometimes in one building, sometimes in separate buildings.
- Additional items such as sand house, oil store, Admin. Offices, such as Chargeman, DLE (District Locomotive Engineer), etc.

Some of these items would have been superseded in the diesel era, and some would only be found in particularly large depots. Some of the shed variations are indicated in the accompanying illustrations and diagrams.

Variations in Depot Design

Following are some examples of the variations in layouts of a selection of depots in NSW:

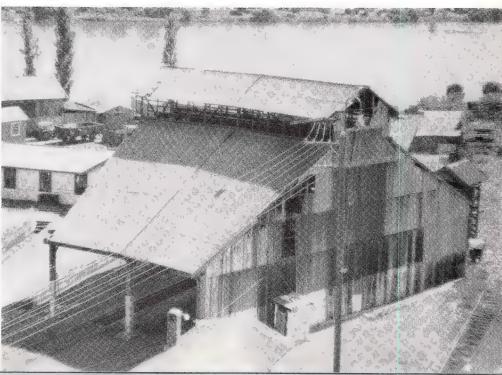
- Small depot, no turntable Yass
- Small depot, turntable but no shed Oberon, as built.
- 3. Small depot, over TT, into the shed Rankins

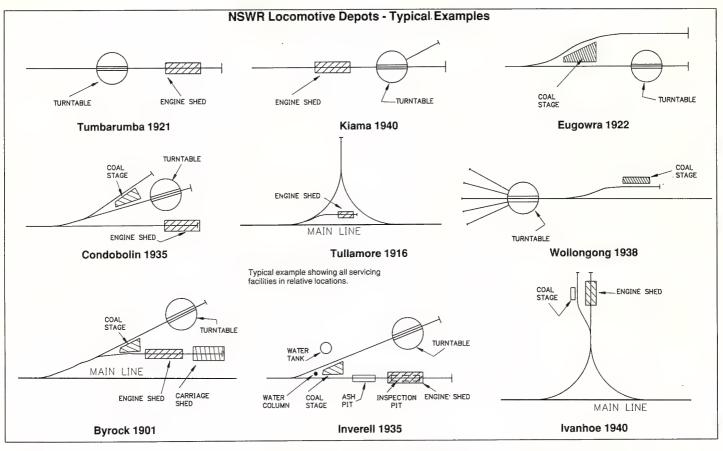


Above: The three-road through shed at Mudgee with the daily service railcars awaiting the return trip to Lithgow. Photographed by Bob Gallagher in 1972

Page Top: One of the largest depots in NSW, Eveleigh shed, in the early 1900s. NSWGR photo courtesy of Noel Thorpe.

Right: South Grafton ventilating ridge roundhouse had been reduced from six roads to two when photographed by Bob Gallagher in 1973.





Springs

4. Small depot, through shed, onto TT - Kiama

- Small depot, shed and TT on separate roads
 Oaklands
- Small depot, shed, TT and coal stage on separate roads - Glenreagh
- 7. Unusual small arrangements Byrock
- 8. Triangle style, shed on 3rd leg Ivanhoe
- Triangle style, shed inside triangle Tullamore
- 10. Larger depot, 2 road shed Narrandera
- 11. Larger depot, 3 or 4 road shed Narrabri West
- 12. Depot with TT and radial roads, but no shed Wollongong
- 13. Large depot, small roundhouse Broken Hill 14. Large depot, large roundhouse Parkes.

In all these cases, additional buildings and structures are arranged to form the complete depot. Water columns, tanks, coal stages, offices, etc. are all part of the arrangement, but the given examples show the basic possibilities with track arrangements.

What must be remembered is that usually the smaller the operational area, and probably the fewer locomotives, the smaller the depot needs to be. As more mainline power is presented, so a corresponding increase in the size of the servicing facilities is needed also, if accuracy is to be maintained.

Turntables

A word on the provision or otherwise of a turntable. By 1950, the NSWGR had 134 turntables in service, comprising:

36 x 50' diameter turntables

75 x 60'

19 x 75

4 x 90'

By the early 1950s, a 100' and 3 x 105' turntables had been added to this list.

Apart from this, 21 triangles (termed a 'wye' in the USA) were in use, so it can be seen that turning of locomotives was very much a part of the NSWGR.

To give you an idea of their use . . .

50' turntables were used to turn steam locomotives up to the size of 30 and 32 class engines fitted with six-wheel tenders.

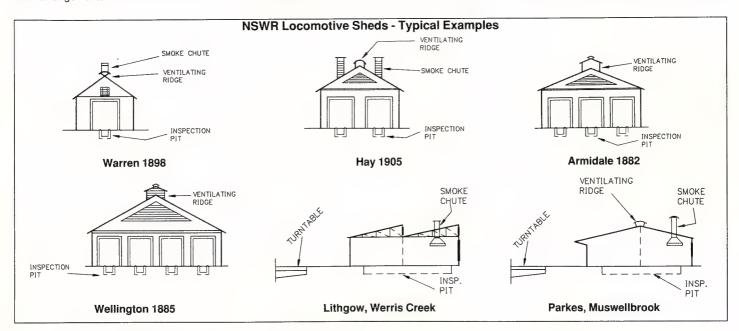
60' turntables were used to turn passenger locomotives up to the 35 class, and Standard Goods engines (50, 53 and 55 class) and the 59 class. The 36 class engines could be turned on the 60' turntables, if a balance could be obtained, and there were no overhang problems. It was done at Armidale and Molong regularly, but it was difficult in other locations.

75' turntables were used for engines up to the size of the 38 class.

90' turntables were used to turn engines up to the 57 and 58 class.

100/105' turntables were used to turn every-

These turntables were designed for use in steam service; in later years diesels would be turned if they could fit on the turntable and the crew desired it for crew comfort. In other words,



Right: Binnaway loco had a four road ventilating roof roundhouse. NSW SFA photo

Below Right: Perth-bound 3801 was being serviced on the "Western Endeavour" when 5907 was resting in front of Bathurst loco, in early September 1970. Photo by Bob Gallagher.

diesels later made use of the old turntables if they were suitable or available.

The series of articles on NSWR Turntables in AMRM by Alan Templeman is recommended reading. (The 105' turntable is covered in this issue - Editor)

Conclusion

In summary, all the information presented here shows that virtually any combination and arrangement of servicing items are possible; there is (or was) a precedent for all layouts.

In creating a model locomotive depot, modellers will undoubtedly choose an arrangement that suits their needs and provides a modelling challenge. Study of diagrams of specific locations and eras present many variations. Some of these have been included in my series of articles in the NSW RTM Roundhouse Magazine. They are:

April 1986 - Bathurst Depot. July 1986 - Werris Creek Depot.

October 1986 - Werris Creek Depot.

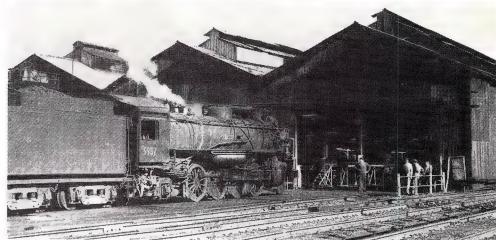
July 1987 - Gosford Depot.

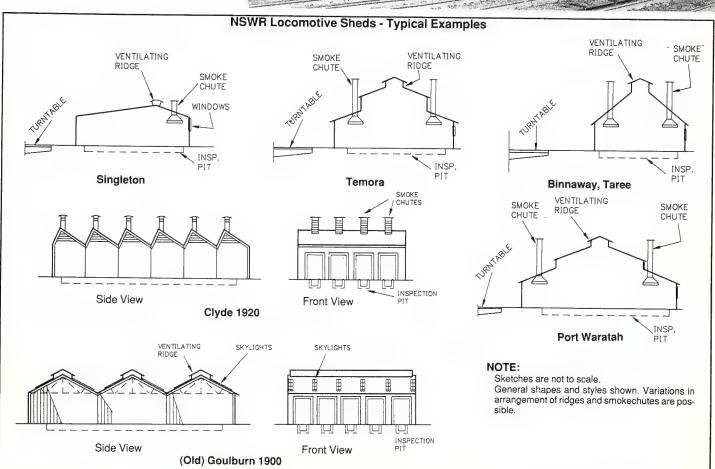
January 1988 - West Tamworth, Armidale, Tenterfield Depots.

October 1988 - Wagga Wagga, The Rock, Culcairn Depots.

Ray Love is continuing his NSW Steam Locomotive Depot essays in the recently released Byways of Steam from Eveleigh Press. The first essay covers the large depot at Taree and its three out-depots of Wauchope, Kempsey and Macksville.







AMRM NEWS

Compiled by Bob Gallagher

Wotsinaname

The model railway hobby, like most facets of life in Australia, is full of interesting and diverse characters. We all like a joke or two, some more than others. One of our correspondents, Big Bad Bob, hides behind the name to expound his views on life, the model railway hobby in general and his desire to maintain every locomotive in the ex-NSWGR Indian Red livery.

Unfortunately some readers are under the impression that Big Bad Bob is the Managing Editor of Australian MODEL RAILWAY Magazine . . . the writer of this column . . . Me!

May I emphatically deny ever putting pen to the name of BBB. Sure my name is Robert, and some may consider me big but I am not tall, but as to being bad? ... well I leave that to my friend and foe, Robert Cooke Esq., a totally different person indeed.

I would not wish to steal Bob's thunder.

National Convention

While Australia does not have a true national model railway convention, the Australasian Region of the National Model Railroad Association will be holding its Regional Convention on May 18th and 19th, 1991 and invites participation from all modellers, especially non-NMRA members. Titled 'American Model Railroading for the 90s', the event will include clinics, model and photo contests, trade stands, silent auctions, videos and layout tours. The Saturday evening will entail a banquet with a guest speaker. The venue is the Macquarie University, will cost \$20.00 if booked before April 15; thereafter \$25.00. The banquet is \$30.00 per person. As part of the proceedings, a raffle for a \$4500 VCR and TV multisystem will be held, tickets being \$5.00 each.

Further details and bookings can be made with Jack MacMicking, 247 Eastern Valley Way, Middle Cove, 2068, phone (02) 95 5988.

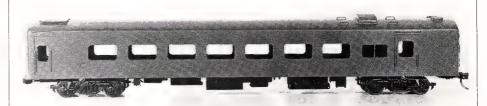
A Great Museum

An attractive excursion during AMRM's visit to South Australia was to Adelaide's recently opened Port Dock Museum. While most other railway museums in Australia are still at the stage of struggling for money to erect cover, complete restoration of exhibits or simply maintain their collections, it is pleasing to be able to report that Port Dock has largely achieved all three aims, thanks to dedicated team work and timely grants from South Australia's 150th anniversary celebrations and the Australian Bicentenary.

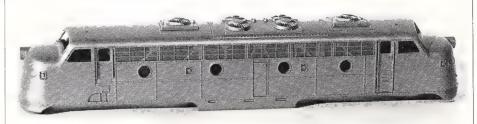
The great benefit to modellers is access to a wide range of equipment for study. Modellers, like other enthusiasts, are demanding in the pursuit of their hobby and often tend to overlook or even denigrate the part played by museums in furthering their enjoyment.

It was thus very pleasing to visit the Port Dock Station Museum in Port Adelaide. Originally located at Mile End, not far from the SAR loco depot, the museum has upgraded in a big way. Sure the site gives the impression of money . . . and plenty has been spent, but it is also the result of a team pulling in the same direction.

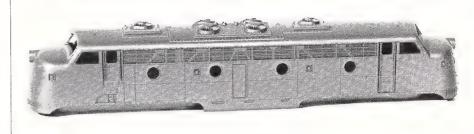
Most of the equipment is under cover. There are pathways everywhere. Toilets, Canteen and book/souvenir shop are readily accessible and very



Along with Powerline's Spirit cars and Finescale Models N cars, VR-V/Line modellers will soon have a wide selection on offer. FSM's contribution to this will be a three-car set of N cars. Illustrated above is one of the pilot cars which have cast metal ends and underfloor detail. The body is a preformed brass etch, fitted to a brass floor. The addition of the metal detail makes for a low weighted model. The window frames, a feature on the N cars, are supplied as nickel silver etches to be added after painting of the model.



Southern Model Supplies advise that the Lima B class is expected in Australia in early 1991. Initially it will be run in VR blue and V/Line liveries. Illustrated above are advance production samples, received days before this issue was printed.



professionally set up. A film/video room and a model room, complete with working HO scale railway, are included

When visiting Adelaide, put the Port Dock Museum high on your visiting priority list. In fact a visit to this museum would be reason alone to travel to Adelaide. There is plenty to see elsewhere in the state, especially a model railway exhibition, the second weekend of October 1991.

Farewell Fantastic

After 24 years serving Sydney's modelling needs, Fantastic Toy & Hobby Shop closed the doors of its Strand Arcade shop in mid-October 1990.

Fresh to retail management, a youthful John De-Horne opened Fantastic in November 1966 and has been closely associated with model railways, particularly local prototype, ever since. The Angel Arcade shop, near Wynyard Station, was a mecca for model railways. Among their stock was the genesis of NSWR HO products, including Frank Slovnick's card passenger cars, Rod Tonkin's aluminium cast 44 class kits and the early Protype range. For a period Fantastic expanded, with a branch in Park Street which was managed by ex-AMRM editor, Peter Woolley, and a western Sydney branch at Phoenix Plaza at Liverpool. Fantastic was then heavily involved with the importation of specialist model railway products.

The declining economic situation and a desire to try new fields have led to John DeHorne closing the doors of Fantastic. John's personal involvement in the hobby will be missed. His tall stature, made taller with his Grenadier's uniform complete with bearskin, was a common sight at the Town Hall Sydney Model Railway Exhibitions.

AMRM congratulates John on his achievements and service to the hobby and we wish him well in his new ventures.

Paradise for Collectors?

With the demise of Fantastic Toy & Hobby Shop we are pleased to note that a very experienced model railway man has not been lost to the trade.

Colin Campbell, 15 years in the business, has beaten the harbour tunnel and moved northside to join

Building Service



A service for those who seek the best finish to their models is offered by WAO Kit Building and Painting. This trade name hides Bill Ottey of 94 Diamantina Crescent, Kaleen 2617, (06) 241 4534) who had a display of his painting at the Liverpool Exhibition. Prices range from \$75.00 for a simple black engine (red buffer beams, numbered, etc.) or hood type diesel in standard NSW Indian Red to \$90.00 for a fully-lined, green 38 class. Also available on request are special schemes, including the Silverton Tramway schemes illustrated above.

AMRM NEWS

the five-year established 'Collectors Paradise' at 77 Archer St, Chatswood which, with Colin's expertise, has opened a model railway department in its 160m² store. Collectors Paradise is one of the largest model car specialists in Australia, as well as the largest in Britains and collectible soldiers, and Meccano.

Initially it will be stocking HO/OO and N scale Australian, English, European and American outlines, together with accessories. Gradually, it will move into the second-hand collectors' market which, like model cars and soldiers, will only be mint and mint-boxed top of the line!

Ticket Please

Stafford Stamps of Box 73, East Kew 3120 currently has a wide range of railway tickets and stamps available. Their catalogue illustrates the tickets available, the price of which starts at 50 cents. Also illustrated are the many railway parcel stamps on offer.

Australian Model Engineer

It is pleasing to report that Australian Model Engineer, the magazine for the live steam fraternity is not to fold, as was revealed recently. The small format magazine, which was published monthly from Canberra, is to become a bi-monthly and A4 in size, and be published from the NSW Southern Highlands. The managing editor is Neil Graham, once heavily involved in HO scale but now leading a team of talented enthusiasts who require their hobby maintain a leading profile as well as having an informative magazine. We at AMRM wish Neil and his gang well in their venture. Their first copy of Australian Model Engineer under the new management is now available. Readers wishing to contact AME should ring (048) 84 4278.

Pacific Railway Magazine

While on magazines, it is interesting to note that Australia is to get its 'own railway magazine'. According to the advance publicity, Pacific Railway Magazine will be published quarterly, 52 pages with both mono and colour illustrations, cover Australia, New Zealand and South East Asia featuring all gauges from broad gauge to 5" live steam. The first issue is expected shortly.

Exhibition Reports

This issue sees the last of the current style of exhibition reports. For the next year or so we will be presenting reports on highlights from exhibitions. By eliminating some of the repetitive reporting more space will be available for these highlights which will encompass new layouts, innovative displays and presentations, new and interesting models.

To ensure we obtain coverage from all exhibitions we invite contributions from readers who either attend or participate.

Brasstic 45 Detailing Parts

With the popularity of the Brasstic articles, we are accurately aware that the major detailing parts, those from the Mansfield Hobbies locomotives, are no longer available. Consequently, we have arranged for some of the components to be made available, albeit in limited form. Exact pricing and supply details will be advised next issue. Provision has also been made for the SAR 600 class.

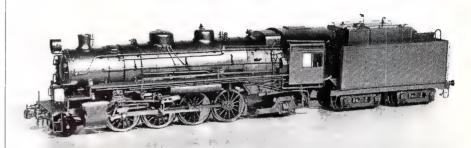
Commercial News

The 1990 Sydney Model Railway Exhibition may have been down on layouts, with the late withdrawal of a number of displays, but it must go down in history as being the exhibition where the largest number of NSW products was released.

The AMRM stand not only featured the recently released AMRM 1991 steam and diesel calendars, and Byways of Steam, but also released the soft cover version of Tony Gogarty and Ron Preston's Diary of the Bicentennial Train. While on books, Edwardian Enterprises released Spirit of Rails, Bowenia Publications released Laurie Anderson's Seasons of Steam while NSW RTM released its calendars and Ken Grove's The Big Engines.



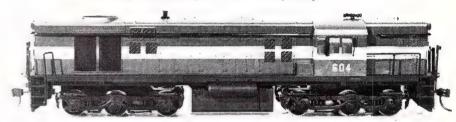
The pilot model of Lloyd's Model Railways 421 class kit.



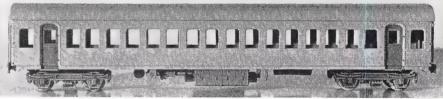
Pilot model of the oil burning D59 class kit built for Footplate Models by DJH.



Advance production sample of L&C Kits TBC passenger car side.



AR's latest SAR 600 class livery is superb. The Maroon and Silver is delightfully painted with impressively blackened sections. The modeller will only have to paint the bogies silver after detailing, fit Kadees and handrails and a superb model will be awaiting many years of work.



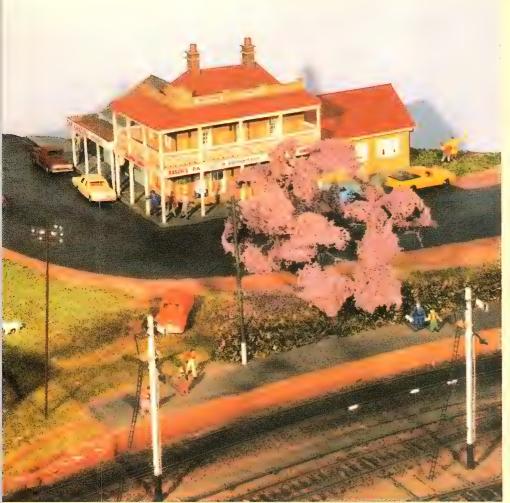
Berg's Hobbies have received a preproduction sample of their multi-piece, injection moulded, N series NSWGR passenger cars. The moulding detail is superb and the car will come complete with all underfloor detail and moulded flush glazing. The cars (FN, BN, RFN and HFN) will be supplied as they ran in the mid-to-late 1940s, with no roof ventilators (other than the toilet vents). It is a simple matter to add vents to bring them into the 1950-1970 period, and Berg's plan for an updating kit to follow. In this early condition, the modeller can pain them in tuscan with twin lines or strawberry and cream. As can be seen from the photograph, the fine window bar has not been moulded as part of the body. It will be included in the window moulding, and should therefore be commendably fine. The multi-piece, injection moulded bogie is the 2AL type, not previously modelled, which was common under these cars for most of their life. NSWR modellers should await the arrival of these kits (due early next year) with bated breath!

For the model releases, Ian Lindsay Models released the NSWR 70 class diesel and supplied further R class cars, Far North Hobbies released a few 421 class kits, AR Kits released the 2AA and 2BS bogies, while the Footplate Models/Lloyd's Model Railways stand released a multitude of new products. These included the roundtop C36 kit, D59 kit as oil and coal burner, shunter's truck, BOB cars, coalfield brake van, outside braced BCW cattle wagon, ABV biscuit van and fettler's hut and trolley. The roundtop C36 and BOB cars were sellouts. Completing the list was L&C's passenger

car sides for the TFX passenger car.

Forthcoming models on display included Lloyd's 421 class diesel kit (due early 1991), Silvermaz' CPH railmotor and NZ built 442 class loco kit, Powerline's Spirit of Progress cars, Berg's Hobbies NSW SRA 80 class diesel and AR's latest paint scheme for the 600 class. The painting of the latter, in maroon and silver, is exquisite.

Not on show at the exhibition, but available for viewing shortly after, was the test mock-up of the FN Continued on page 56.



CRAFTON

The hotel where the pleasant sounds of steam engines can be heard and a night of rest was attained before the visit to Crafton.

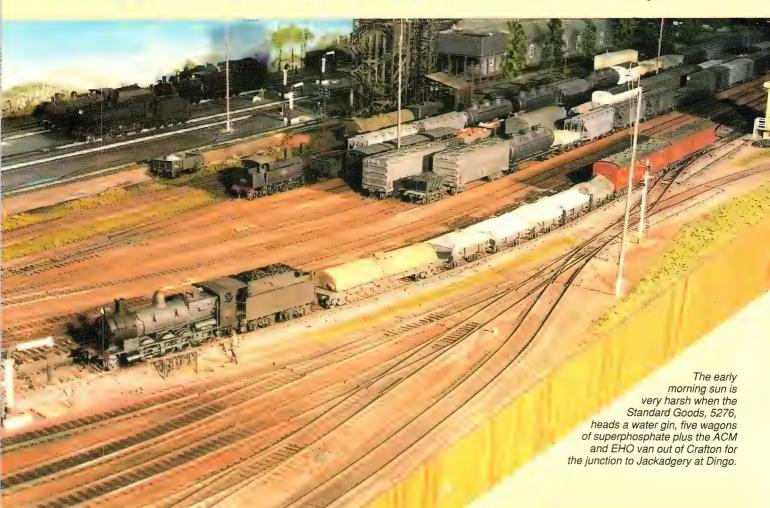
The introduction to Rod's Crafton was published in the October issue of the Australian MODEL RAILWAY Magazine.

After spending a night in the local hotel at the end of our holidays, we walked over to Crafton Signal Box, introduced ourselves to the signalman and asked permission to watch train movements from its elevated vantage point. The time is now 4.00 a.m. and the first train to turn up is the down North Coast Mail. After the ACM and van are uncoupled from the rear of the train and the crews change, the train charges out of the station, the 36 class exhaust reverberating off the buildings as it prepares for the 1 in 50 grades ahead. The ACM and van are left on the mainline in front of the station to form part of the mixed for the branchline to Jackadgery, which branches off the mainline at Dingo, one crossing loop north of Crafton, on top of the Richmond Range.

A 50 class with a bogie water gin and five S trucks of superphosphate backs out of the awakening dawn down onto the ACM and van and after the signals are pulled off, the fireman is given the staff for the single line section to Dingo and the train then departs with very little fuss.

One of the shunters then takes a key and proceeds to the northern end of the down yard to unlock the point frame to allow two 53 class locos out of the loco depot. The frame is then relocked and the shunter with the key returns to the signal box. With the necessary levers pulled off in the signal box, after a telephone conversation with one of the shunters, 5466 and 5367 back into the down yard and couple onto a train.

Meanwhile, in the up yard, a goods train is about to depart. The guard is waiting on the platform near the signal box, the signal is pulled after the points have been changed and the train slowly pulls out onto the mainline and stops with the brake van at the signal box end of the platform. The guard then proceeds to sweep the van out, fill the water tank using the hose on the





6034 and 6009 back onto the loaded coal train in the north goods yard.

platform and conduct a continuity test. The up mainline starter is pulled off and when the fireman has received the staff for the single line section to South Crafton and after the guard gives right-of-way, the train departs.

Just as the sun is rising, we hear the signal-man at Dingo offering an up goods train with the bell code of 1 - 2 - 1. After repeating the bell signal code and holding it down to allow Dingo to withdraw the staff, two bells are heard to indicate the departure of the train from the junction station. The signalman then pulls off the home signal.

Fifteen minutes later we hear the sound of

brakes squealing as the train descends the bank and comes into view at the north end of the yard on the mainline. The signalman walks down the steps and onto the walkway beside the signal box

Rod James conducts a rail fan visit around his award winning layout.

and collects the staff from the fireman and returns it to the miniature electric staff instrument, then acknowledges the arrival of the train. Once the van is clear of the signal on the up side of the

signal box, the train stops, the points to the up yard are changed and the dead end shunt signal is pulled off.

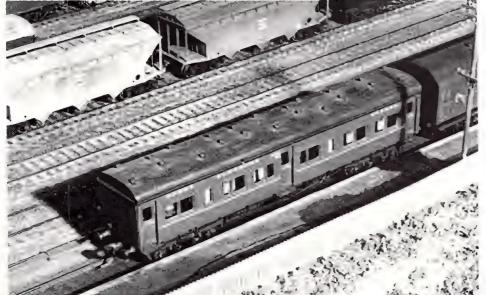
After three short blasts of the whistle, 5914 then proceeds to start the train back into the up yard. The engine is uncoupled from the train and, after the shunting signal in the up yard is pulled off, the engine proceeds forward slowly through a set of double slips, over the mainline and onto the loop and stops. With the points restored, it then proceeds back down the loop past the dead end shunt signal, down past the point frame onto the loco release road. One of the shunters changes the staff, making an entry in the Train Move-



Australian MODEL RAILWAY Magazine. December 1990. Page 51.



The branch mixed is a daily occurrence and not always rostered to a Standard Goods engine. On the previous day, 2413, after arriving at Jackadgery, shunts its load of four-wheelers clear of the ACM and van, which are being unloaded at the station.



ment Book (TRB), and then proceeds to the northern end of the down yard with a staff for 5466 and 5367 on the goods train ready to depart. After receiving the staff and the brake examiner's sheet, and with the signals pulled off, the engines start the train slowly, pulling out onto the mainline. With the van clear of the points on the mainline, the driver opens up the throttle and the train charges the 1 in 50 grade to Dingo. The shunter then proceeds to the frame at the loco depot release road, unlocks the frame, pulls the points over and allows the 59 class to enter the

Left: The ACM composite car sitting in Crafton station prior to being attached to the branch mixed at Jackadgery.

Below: 5916 banks behind a PHG brake van on a northbound goods. The banking duties cease when the goods train reaches the summit of the Lawrence Bank. 5916, has the bank engine key, to return back to Crafton for further banking duties.



Page 52. Australian MODEL RAILWAY Magazine. December 1990.



In the early morning dawn, 3624 lifts the northbound mail train after detaching the ACM composite sleeping car and van for the Jackadgery branch.

Beyer Garratts, 6034 and 6009 ease out of the north yard and onto the main line before storming the steep Lawrence Bank grade.



Australian MODEL RAILWAY Magazine. December 1990. Page 53



Yard shunter 2619 works the up yard adding extra load to a southbound goods train.

Photographs by Bob Gallagher.

depot down the arrival road.

Back in the signal box, after a cup of tea and a biscuit, we hear the bell code announcing that the down Brisbane Express will soon be departing South Crafton. Meanwhile, 3225 has left the loco depot and is sitting in the crossing loop in front of the signal box. The Express is heard crossing the Crafton bridge and a few minutes later is seen drifting into Crafton platform with a very clean 38 class at its head. It stops just short of the down starting signal. The 32 class in the loop, then moves forward through the double slip and onto the mainline. After the points have been restored to the mainline, the 32 class moves back and stops just short of 3810, the fireman climbs down and hand signals 3225 backs onto 3810. After coupling up, the fireman climbs back into 3225 and, once in possession of the staff for the Crafton-Dingo section and after the guard has given the right-of-way, the train departs under clear signals.

We thank the signalmen for their hospitality and, after signing the necessary indemnity forms with the Station Master, we proceed towards the loco depot, taking photos along the way. After a short conversation with the Chargeman in the loco depot in which he impresses on us the importance of safety when around railway yards and locos, we walk to the northern end of the loco depot, taking photos as we proceed.

We arrive just as 6010 off a loaded down coal train (the coal is bound for export in Brisbane) is

heading into the depot. Recording the progress of the loco through the depot on film, we watch as first the engine takes water on the arrival road and then as it moves forward. The ashpan is emptied after the fire is cleaned over the ashpit. With this completed to the satisfaction of the foreman, the engine moves forward to the coal stage and then down beside the running shed to the sand tower where all the sandboxes are filled with hoses from the elevated bin. The engine then proceeds onto the 105' turntable, is turned and then runs into the shed for some small repairs before being placed on the departure roads, ready for the next assignment.

As we walk out the northern end of the loco running shed, we see Garratts 6034 and 6009 leaving the loco depot, then backing down onto the loaded coal train in the down yard. We hurry to an embankment at the northern end of the yard, on the up or eastern side of the track, and get a series of spectacular photos as the double Garratts and coal train depart the yards and charge the bank heading for Brisbane.

By now it is mid-morning and we decide to get some photos of the (unique for NSWGR) 26 class saddle tank engine shunting in the up yard. The sun is in the right position to get some really good shots of the engine moving strings of wagons and shunting them into various sidings onto trains and the occasional van or wagon beside the unloading ramp or the goods shed.

In the down yard a 20 class 2-6-4 tank engine

is hard at work shunting. After a couple of photos, we head back to the embankment at the northern end of the yard to wait for the next train which we were told would be banked in the rear with an oil burning 59 class.

Looking south from our vantage point on the embankment, we see the steam from the whistle of 5056, then a second later hear the sound as the leading engine acknowledges the bank engine at the rear of the train. With the exhaust blowing black smoke high into the air, the train pulls out of the yard onto the mainline and heads towards us gaining speed as it charges towards the bank for the next eight miles.

As the cameras click, the double 50 class engines at the head of the train pass, followed by the rumbling of the train. Soon is heard the steady beat of 5916 beneath a cloud of black smoke pushing hard on the PHG guards van on the rear of the train. We stand listening for five minutes as we hear the train attacking the bank in the distance.

When the sound finally dies, we head back to the station, thank the Station Master for his trouble, and promise to send him some copies of our photos. Being just on lunchtime, we head across to the pub and have a counter lunch with a couple of lemon squashes and then leave for the long drive back home, vowing we will return a few weeks later and spend a few days, rather than the few hours we could manage this time.

a

GREEN SHEEP, AND OTHER COLOURS

by Lindsay G. Collins

Although horsemen often refer to a horse as being 'green', this has nothing to do with his colour, but refers to his stage of education.

Green sheep, or red too for that matter, really does refer to their colour. The only time sheep are white as, well, whatever washing powder is popular, is when they are 'off shears', for the first few weeks after shearing and before they are dipped or sprayed.

Once they have been dipped they have a distinct grey tinge to the skin and very short wool. And, depending on what district or area they are run on, so depends the colour of the growing fleece.

Spring lambs ex-Shepparton, or many irrigation areas, have a definite green colour, from the heavy growth of clover and the pollen rubbing off on the wool. From the dry Shepparton districts sheep have a real red tinge to the wool, produced by the red soil they graze over and lie down

The red colour is also seen on sheep from the Mallee.

Mobs running on volcanic or Riverina black soil, which is very powdery in summer, take on a light to dark grey colour because of the dust in the wool.

For the first week or so after birth, young lambs look snow white from a distance but a few yards away have a real yellow colour, because of the lanolin in the wool. This is nature's way to keep the youngster

protected from the elements for the first week or so.

Cattle and horses do not take on the colour of the soil to be noticed, unless they have just (horses especially) rolled in a patch of dust or mud. Any soil colour is in the mud of the water hole or wet paddocks on the lower leg

In winter these large animals grow long hair and the coats, from a distance, look dull. In summer, with the nice short coat and the sun shining, they can have a noticeable shine.

Different breeds are more common in some areas than others, although all breeds of beef or dairy cattle may be seen in the one area, one or two maybe more popular than others.

For instance, in a well-known Hereford area, there will always be one or two properties running Shorthorn or Angus cattle. Likewise in the dairy areas where Fresians are the popular breed, there will be one or two Jersey, Guernsey, or even Illawarra Shorthorn, studs or dairies.

Post-war modellers have a bewildering choice of cattle, with all the new breeds imported since then. The first of these was the Brahmin or Zebu, now seen in all States, and many others, added to by the many crossbred mobs one sees.

Even exotic mobs like deer and ostriches!

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BRANCHLINE Ramblings with Ron Cunningham

Now Arriving At 'Werris Creek' - The Third Dimension

(Running Just A Little Late)

One of the problems of being involved in the building of a layout from scratch is that progress usually occurs in small increments. True, there are sometimes dramatic changes that arise from intense periods of activity but this is more the exception than the rule.

No, the best that can be hoped for at the regular monthly get togethers on 'Werris Creek' of the Friday-night Ramblers is that there has been at least some small progress on the model railway since the last meeting.

Sometimes two or three months pass without any progress but I generally manage something. In fact, after three years of actual construction I have found that the secret to rapid progress is to aim for small but constant construction activity, with the emphasis on constant.

I had intended adding here an estimate of the average number of hours spent working on Werris Creek each week but one of the Ramblers who is standing next to me as I prepare this column suggested that it might be dangerous to put in print such a figure. As various members of my family occasionally read this Mag he might well be right but I'll take the chance anyway and 'guesstimate' the figure to be about 12 hours per

Whatever the time spent though, the result, hopefully, is pretty much the same - steady marginal progress.

One of the side-effects of this, is that one gets used to the layout's appearance in its various stages of completeness. I like building benchwork and laying track so this part of Werris Creek has progressed quite rapidly to the point where almost all of the benchwork is now complete and about 80% of the trackwork is in place.

The result, for a long while was a lot of fancy timberwork with track perched above it on its risers and not much else.

Therefore, largely at the insistence of several Ramblers I began interrupting the steady progress of the benchwork and tracklaying and forced myself to install some basic scenery.

The process is quite simple. Once I have added the front timber paneling to a section of benchwork I fill in open areas between the front paneling and the scenery backboards with waste styrofoam which I scavenge from anywhere I can. Most of it comes from office equipment

The styrofoam is glued in place and shaped with a hot wire cutter to give the basic scenery form. This is then given the traditional paper towels dipped in plaster treatment followed by a coat of light tan colored acrylic paint after which I can get back to the benchwork and tracklaying.

Lately however, several of the Ramblers have taken to going further with the scenery and have begun adding zip-texturing, foliage, water and just about anything else they can think of. The result is quite startling and although much of it will be added to, changed etc. as Werris Creek develops, we are all quite pleased with the effect the addition of scenery

This is particularly so when visitors arrive, as they get a picture of what Werris Creek should look like when it is finished (if it ever is).

One Sunday afternoon when I just happened to be working on Werris Creek one of the Friday-night Ramblers dropped in with something he had been working on.

It was a mock-up of the model he proposed to build for the milk siding at Aberdeen. We quickly located it in place and fiddled around until we were satisfied it would fit in the space available.

The use of mock-ups to gauge the impact a structure will have on a scene has a lot of merit and is a subject I hope to return to at a later date. At this stage it is enough to state that I stood looking at the mock-up long after its builder had departed to start work on the actual model.

I guess it was about that time that I first began to feel uneasy about the mock-up's impact on Werris Creek. It wasn't something that I could immediately put my finger on but there was definitely something amiss.

One Friday night about two weeks after the arrival of the milk depot mock-up the usual crew were joined by a most welcome visitor in the shape of Keiran Ryan.

Those readers who haven't seen Keiran at one or other of the exhibitions or conventions of late would be acquainted with his outstanding work in the area of wheat silos through the series of articles currently running in AMRM.

After the usual exchange of pleasantries Keiran produced one of the silos that he was currently constructing. It happened to be the model of the S008 located at West Tamworth which is featured in the current series

We quickly found a place for it (temporarily unfortunately) on Werris Creek in the wheat siding at Aberdeen. The silos are quite an imposing

structure being about 92 scale feet high overall and all present agreed that they looked superb. I was quite disappointed when Keiran remembered to take them home with him at the end of the evening.

However, the placing of the silos at Aberdeen, regardless of how temporarily, caused similar feelings to those that I had experienced when the milk depot mock-up first appeared.

Something was wrong but I couldn't quite identify what it was.

It was not until the following week when one of the ramblers drew my attention to the impact that the height of the silos had had on the overall scene at Aberdeen that the cause of the unease was correctly identified.

Prior to the arrival of the three-storey milk depot and the towering grain silos, the tallest features on Werris Creek were the station buildings which were not much higher than the trains themselves

Put simply, for over three years now I had been building a two dimensional model railway. I had largely omitted to add anything of any height to Werris Creek"

True, there are tall cliffs and rolling hills but on most of the railway the tallest items were the locos and rollingstock.

I had clearly forgotten to add the third dimension - height.

The result was that the trains dominated the layout which, unless you are modelling the featureless plains of the semi-arid parts of the outback is not the case on the prototype.

In most cases, man-made objects and, more usually, trees tend to overpower locos and rollingstock so that the railway moves through the scene not over it.

Even in the flat open terrain of the outback where much of the natural vegetation has been cleared the remaining pockets of trees, and manmade objects such as silos, tend to stand out even more. Approach just about any small country settlement with a rail-served grain silo and you will notice how the silos dominate the sky-line.

The complete absence of such items up until now on Werris Creek had gone unnoticed because the gradual changes on the layout had accustomed us into believing that this absence of height was the normal state of affairs.

The introduction of height through structures such as the silos and the milk depot had forced our formerly uncritical eyes to compare the new scene with pictures stored in the memory section of our brain which perceived a much better match with reality now that the third dimension

The discovery of this missing dimension made me return to the model railway to see what could be done to rectify the situation.

The most notable absence is trees. Not your normal run of the mill, standard model railway type trees though. No, if you examine trees in the wild they vary in height enormously but an average tree would be around 50' tall. This is 7" (180mm) in HO.

At this height they tower over locos and rollingstock. However on most model railways the trees are typically much shorter than this. (This seems to be particularly so on exhibition layouts which is no doubt due to problems of transportation.)

I have therefore moved the making of trees up the list of things to do on Werris Creek and have made a mental note to ensure that they are the right height when they are made. Apart from trees the other items which provide height are the man-made objects which dot rail-side.

If you are modelling wheat country then you have an ideal structure in the grain silo but there are many other structures that can add height.

Buildings such as flour mills, and abattoirs are usually two and three stories high, enough to add height. Some station buildings are also two stories high. Fortunately Werris Creek station will be in this category when it gets built.

Add to this other railway structures such as coal stages and water tanks and you begin to appreciate the height factor on a model railway.

I haven't added anywhere near enough of the third dimension to the 'Creek' yet but I greatly appreciate having been taught a lesson by the silo and milk depot experience.

Come to think of it though there were probably two good lessons

The first related to the missing third dimension. The second was a timely reminder to occasionally take a step back from your modelling and cast a critical eye over what you see.

Like me you may have become so used to seeing it in a particular state that you have overlooked some important feature.

Had I not been shown the error of my ways I might still have been busy building a two dimensional railway.

Continued from page 49.

carriage kit from Berg's Hobbies. The Welsh-built kit, on display at Parramatta, is a fine example of these steel passenger cars.

Following the exhibition, Footplate advised of orders being taken for more roundtop C36 kits. The AD60 Garratt kit, the next production from DJH, is planned for 1991, with a pilot model expected in March. Meanwhile Lloyd's is taking orders for a second run of the BOB cars as well as advising of their next kits, the ICV insulated four-wheel van and KKG horse box.

L&C Kits will be releasing the TBC first class passenger car replacement sides for the Lima passenger cars in November. Providing there is sufficient interest in these components, L&C plan to produce the four car NCR set as their next project.

Precision Scale Models advise that the V/Line A class model is due in December, with the N class due May 1991

Broad Gauge Bodies have released a new range of products which are labelled 'Hobby Kit'. All of these have been available for many years to members of the South Australian Railway Modellers Association. Various SARMA members are responsible for the pattern making which, so the quality varies accordingly. Some of these Hobby Kits may require some repair or modifications during assembly. There has been a heavy demand for these kits from modellers outside of SARMA, Current range includes the former EMCE SAR and VR ELX open wagon kit, the SAR LX/AN ALGX louvre van kit and the SAR Cf four-wheel cattle wagon

An interesting product from Adelaide's Model Centre is a set of Ghan cars. Model Centre has had the four Lima stainless steel passenger cars painted with the red and yellow toning between the windows and 'The Ghan' lettering and distinctive Red and Black logo applied. Selling for \$30.00 a car, the three IP cars and one Southern Aurora car make up the set. Model Centre did not expand on how long these cars would be available, but has indicated that, due to occasional supply problems, they could be in short supply

Alco Models advise that they will be replacing the sliding cab window frame and glass on their VR T class as soon as supplies arrive from Korea.

Finescale Models advise that due to the lack of deposits, they have been forced to cancel their VR R class kit project

Australian Model Craft advise that they have been appointed agents for the Greenberg range of books, which covers many hobby fields, especially collecting and modelling railways. They also advise that Continental Modeller will be published monthly as from January 1991, and are promising a wider Australian content. It does appear AMRM has an overseas competitor at last!

AR Kits has released a range of lead-free, acrylic lacquer paints to complement its range of models. Packaged in 'large economy size' 50ml bottles, this is the same paint that is used by AR on it latest models and anyone who has seen the soon-to-be-released maroon and silver SAR 600 class will know what a pleasing result is achieved. The range of colours comprises AN Green, AN Yellow, SAR Maroon, SAR Chrome/Silver, SAR Mustard, NSW Indian Red, Chrome Yellow, Wagon Blue, Candy/Red Terror Red, Candy Orange and All-purpose Black as well as all purpose self-etch black. These paints are suitable for spraying and are available at \$5.00 rrp from hobby shops.

Ron Preston has released a limited hard cover version of his Richmond Vale Railway book. The rich red cover features, while each of the 100 books are numbered and inscribed by the author. Each book sells for \$35.00 plus \$4.00 post from AMRM. Ordering details are on page 84.

The Big Train Station has taken delivery of the initial run of the REA Santa Fe War Bonnett FA1 diesels.

LJ Models advise that their next card kits will be for the N scale market and include the A4 NSWR station, G3 goods shed, a signal box and a number of small buildings. Their latest HO releases included a single road NSWR 60' loco shed and a ganger's shed and



Son of Warrah or Warrah II on display at the Sydney exhibition was not so much a layout being built as a novel baseboard construction method being displayed. Hopefully an article describing the idea in detail will be forthcoming, but in brief the welded aluminium frames have been designed for a modular system that will facilitate light sections and easy displaying. Craig Armstrong, son of Howard was on hand to describe the proposals of the New South Wales Railway Modelling Group.



TP5, the latest BGM release. The model is a BGM T van fitted with their new TT30 bogies.

'out-of' shed.

Broad Gauge Models are now packaging their wheels in bags of four or eight. A new release is a pack of brass investment air pipe castings, four air reservoir types and four brake types.

1991 and AMRM

We at AMRM have a number of goodies lined up for next year. On the layout scene we have some delightful NSWR layouts to cover, in both HO and N scale. Construction wise, Keiran Ryan will conclude building the S008 silo, with additions for the S016 and S024 sizes. We will be presenting an accurate conversion of the AR Kits SAR 600 class, and the Brasstic Boys are hard at work again, but on a Victorian diesel this time. Other articles in the pipeline include Harry Bender's O scale modelling of locomotives, the building of a NODY open wagon, live frog pointwork, and the superdetailing of a kit or two.

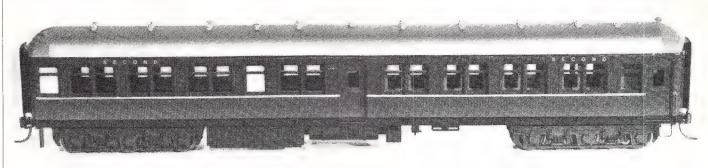
Our associate publishing wing, Eveleigh Press, will be producing Byways of Steam - 2 due for release in March/April and will be distributing John Thompson's book 38 Class. Other publications are in the pipeline, including Ron Preston's Standards in Steam - The Fifty Class, details of which will be advised at a later date.

Happy Christmas

Where has 1990 gone? Yes it is Christmas time again. The Editor and management of the Australian MODEL RAILWAY Magazine wishes each and every reader a happy and enjoyable Christmas, and trust that the 1991 will be healthy and prosperous for all.

ADVERTISING DEADLINE

February 1991 Issue Advertising deadline is:-December 6, 1990.



L&C replacement TFX sides for the HO scale Lima NSWR passenger cars.

Replacement Sides for Lima NSWR Passenger Cars in HO scale by L&C Kits, PO Box 276, Moorebank, 2170. Price: \$15.72.

The first in what is hoped to be an ongoing series, L&C Kits has released two injection moulded sides to fit any of the Lima 72'6" cars (viz. MBE, TAM, MFE). The sides released are for the TFX Second Class sitting car.

Nine TFX cars were built by Eveleigh Carriage Workshops during the period 1914-1920. Like their First Class counterparts, the TBCs, the TFX stock was intended for prestige mainline working, but later followed their first class brethren to other types of operation. Both classes of cars featured crownlights, narrow matchboard sidings and the earlier style of wide access doors. It is in this guise that the two model sides have been produced.

The sides have been very cleanly injected in a polystyrene with dissolving qualities the same as Lima's. Therefore, they join well together, using any of the liquid solvents.

The sides are correct scale length, whereas the Lima cars are 6 scale inches short. This, then, gives the modeller at least two alternatives for assembly:

 remove the existing sides only, then file the new sides to length to suit; or

totally remove the ends of the Lima car, glue to the new sides, then make up a new floor from 0.040" styrene (as recommended in the instruction sheet).

Having tried both methods, I found the second one to be the easier. The extra 6" in length of the car has no adverse effect whatsoever on the roof length. If anything, the roof edging now comes flush with the ends. Of course, the black locating lugs on the chassis must be removed, and the chassis can either be glued back on when finished, or screwed back on using coupler mounting screws.

Even though the new sides are moulded in a reddish colour, the completed model will have to be painted. Like all plastics, try your favourite brand of paint on, say, the inside first, just in case. I used colours from the Craftsman range with satisfaction.

The instruction sheet includes a diagram for the roof vent locations, plus a diagram for underfloor detail. The roof vent diagram is wrong and L&C Kits have subsequently amended the instruction sheet. The corrected drawing features in lan Dunn's article elsewhere in this issue.

This is not a kit. The two sides form the nucleus for constructing a model of a class of car not currently available. Once you start, you will go the whole hog by replacing the roof ventilators, glazing, couplers and so on. It's easy and it's worth it. The only problem is that there are now no second hand Lima cars on the market!

Car numbers for the nine TFXs were 1934 (destroyed in 1926), 1935, 1936, 1937, 1938, 1939, 590, 597 and 598. In summary, a most enjoyable project to convert and detail.

Allan Brown

Byways of Steam, published by Eveleigh Press, PO Box 345, Matraville, 2036. Price: \$19.95 (\$21.75 posted).

Byways of Steam is a new and unique publication aimed at the railway enthusiast and the modeller who wants to follow closely prototypical practice on the NSW Railways. Although Byways is a steam era book, much of the information is applicable to the diesel era as well. The book is of 120 pages, approximately 183mm x 250mm, soft bound and printed in black and white with coloured covers.

The best way to describe the contents is a collection of short stories, such as one finds in the Australian Railway Historical Society's *Bulletin* or NSW Rail Transport Museum's *Roundhouse*. In fact, the editor of this publication and several of the authors were formerly Roundhouse staff/contributors. However, a number of new authors have also been recruited to add variety of subject and style. The list of authors is impressive: Bob Booth, Ray Love, Ron Preston, Ian Wallace, David Allerton and Bruce Griffey.

Each article or chapter is a complete entity, yet, because of the common theme of NSW steam, they somehow blend together. The subjects covered include Brogans Creek, one of the more isolated crossing loops on the NSWR, and they continue the concept of the Byways of Steam articles which initially appeared in Roundhouse by author Bob Booth. Ray Love also continues his Locomotive Depots series from Roundhouse in this new book. Additionally, lan Wallace relates a tour of the South West in 1961, Ron Preston rides the Tarana to Oberon Mixed, Bob Booth backs up with a short presentation on Wooden Arm Shunting Signals and retired driver, Bruce Griffey, reminisces about his long career on the footplate. This man has much to tell us and I look forward to the continuation of his story.

This is not a book that you can sit down and read from cover to cover. I described it earlier as a collection of short stories and this is how it should be read. I enjoyed each of the chapters, some more than others, but this reflects my interests rather than anything else. As a result of reading this book, my knowledge has been increased on a subject that is of great interest to me and I will be able to apply some of this to my modelling as well.

There are some five or six new books on offer to rail/model enthusiasts at present, but I would rate this

one in my top two on offer. This book is not only for reading now but for referring to on many future occasions, especially the photos, many of which contain enormous detail for modellers. You should 'read' the photos very carefully. Well recommended.

Phil Collins

NSWGR MRC refrigerated van kit in N scale by Ian Lindsay Models. PO Box 124 Pendle Hill, 2145. Price in text.

There were 58 of these vans built. They are 11.6m long and have wooden bodies on steel underframes. An ice compartment at each end can hold 1 ton of ice. They have an arched roof with a centre roofwalk and six ice hatches and were built in seven orders from 1933 to 1950. Builders included: Railway Workshops, Ritchie Bros, Waddingtons and Commonwealth Engineering. From 1957, they were converted for use as covered vans.

The epoxy resin kit comes in a plastic bag with a stapled cardboard top. It consists of two sides, two ends, one roof, one floor and six hatches. An instruction sheet is included complete with diagram to show the position of the ice hatches on the roof. The details on the castings are very sharp. The kit assembles very easily by following the instruction sheet. The resultant gap when the roof is fitted is easily filled with putty. Part of this is covered by the two end ice hatches, the other four ice hatches fitting into notches in the roofwalk. The floor fits into the second step in the sides to sit at the correct height.

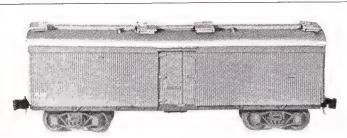
After assembly the model must be washed to remove any residue of release agent used in the casting process, then it is ready for painting. The 2AE bogies are not available but the instructions suggest an alternative to use. The model scales correctly and when finished is a very nice unit. The kit sells for \$ 12.75 and the bogies \$6.50 for a pair with couplers and \$ 3.50 for a pair without couplers.

David Bennett

NSWGR NGMF/NGSA Wheat Hopper Kit in N scale from N-Trains, PO Box 257, Merrylands 2160. Price in text.

During 1987 the FWH/NGBF wheat hoppers were re-built, at the request of the Grain Handling Authority. The conversion included alterations to the ladders, roof hatches and most noticeably, the roofwalks. The modified hoppers were re-coded to the NGMF series. During 1989 the NPSF wagons were re-built and recoded NGSA to bring them into the grain wagon fleet.

The injection moulded styrene kit comes in a plastic bag with a stapled cardboard top. The top has a



NSWR MRC refrigerated van kit in N scale by lan Lindsay Models



NSWR NGMF/NGSA grain hopper kit in N scale by N-Trains.



The latest release form Broad Gauge Bodies is the VR V or VF louvre van with the BD pattern doors. A standard BGB kit, which retails for \$12.85, it includes the BGB corrugated card for the roof corrugations, a detailed instruction sheet and decals for the VF and VLPY code and the large VR logo.

photograph and some prototype information on it. Two sheets of decals are included. Six metal ball weights are provided. These are glued in each of the discharge hoppers in the floor. Two sheets of decals are provided to cover the two types of hoppers. The instructions are very brief but as the kit is very straightforward they are adequate. Recommended paints are listed to cover the two colour schemes available. The parts separate from the sprue easily with only a small amount of filing being required to finish off the parts. After drilling a 2mm hole in each side, the parts are ready for assembly. Glue one side to the floor, then glue both bulkheads and bulkhead supports to that side. Next glue the other side to the rest, install brake gear as per diagram and glue weights in place. Glue roof in place followed by the roofwalk, then install the ladders and it is ready for painting. If modelling a re-built NPSF then the instruction sheet details the modifications necessary for this version. The kit is available in two forms; the kit without bogies retails for \$15.00, and that with bogies retails for \$18.75. The moulding on this kit is very sharp and it looks good when assembled. This is worthwhile addition to the N scale modeller's range.

David Bennett

Data Sheet plans for NSWR Standard Signals mechanically worked, in HO scale from Data Sheets, 12 Whalan Place, Kaleen, 2617. Price: \$ 5.00 sheet.

Signals add realism to any model layout and help confirm the time period which the modeller is seeking to display. Mechanical signals, whether working or not, give a splash of colour and also provide a much needed vertical dimension and perspective for the discerning viewer who wishes to see more than a train just going around. Background information on NSW mechanically operated signals (including both semaphores and ground discs) has been rather limited in the past. So Greg Edwards' recent two additions to his Lineside Data Sheet series will prove to be most valuable for

those researching the large variety of mechanical signals used by the NSWR. $\label{eq:constraint} % \begin{subarray}{ll} \end{subarray} % \begi$

The first sheet, numbered S4 and titled 'NSWR Standard Signals and Clearances' illustrates various straight post and bracket signals which the NSWR designed as their standard installation from about the 1920s onwards. All important dimensions are indicated including heights of arms and brackets from rail level and the distance between dolls of bracket signals. Subsidiary signals for loops, sidings, wrong road shunt, etc. have all been included.

The second sheet, numbered S5 and titled 'NSWR Standard Signals' features the multitude of standard arms employed on the railway and details the components comprising a straight post lower quadrant signal, plus a side bracket type. The function and colour arrangement of each signal arm is clearly indicated. The principal dimensions of each type of arm, plus the width of stripes, is also given. Ground signals have not been forgotten since they fit into the mechanical category also. Dwarf semaphores, independent revolving discs, disc point indicators and arrow-type point indicators have been included.

Both sheets display Greg Edwards' superb draughtsmanship, making the vast amount of information presented easy to recognise and follow. Several incorrect small details, however, have occurred on sheet S5. The lamp on the signal post has the back light size the same as the 5" lens diameter. The envelope holding the back light glass should be 2" high. The disc signal has a misleading arrangement of targets. The black and white disc should be positioned opposite the green and white diamond. The 'alternative' stand (on which nearly all the independent disc signals were mounted) has been drawn too high. Finally, the independent disc signal is shown as being operated by a lever similar to that of a point indicator. Independent discs are operated by a T-lever with a counterweight attached. Those criticisms are only minor and do not

detract from the overall fine quality of the sheets.

Both sheets are highly recommended for modellers and enthusiasts. The rate at which semaphore signals are being abolished in NSW makes these sheets an invaluable and comprehensive record which will become a collector's item in years to come.

Bob Booth

A Compendium of Railway Construction, Part Two: North Island Main Trunk, by F.K. Roberts, published by the New Zealand Railway and Locomotive Society, available from the ARHS (NSW) Division, PO Box E129, St James, 2000. Price: \$17.95.

The NZR's North Island Main Trunk line is one of the world's spectacular railways, and the present volume deals with the construction of the rugged central portion of the line in engineering terms. The search for a suitable survey, the actual construction methods and the finished viaducts and bridges are all well documented. The 58 black and white photos, well reproduced, display the spectacular nature of the country and structures, as well as providing fascinating detail for the modeller and period historian. A short chapter on the purchase and incorporation of the Wellington and Manawatu Railway rounds out the volume. Excellent maps and curve and gradient diagrams fill out the detail. This book is essential for those with an interest in the NZR.

Ian Dunn

NSWR 2AT and 2SA bogies by Classic Brass Models, PO Box 72, Liverpool, 2170. Price: \$26.50 pr. With the release of the JHG brake van, Classic

With the release of the JHG brake van, Classic Brass Models have taken the opportunity to separately release the brass investment cast 2AT and 2SA bogies. Individually packed in a poly bag, each type is accompanied by mounting screws and springs.

The 2SA type is a 5'9" (1.75m) bogie, fitted with 3'1" (0.94m) diameter wheels and is a rigid frame, plain bearing bogie. Back-to-back leaf springs, centrally mounted, provide the suspension system. The model comprises three brass castings which are screwed together. There is no springing on the bogie, although mounting springs are supplied. The wheelbase of the model is 5'10", with 10.4mm (3'5") blackened wheels mounted on pinpoint axles. Wheels are RP25 profile, 14.4mm back-to-back - within NMRA tolerances. The bogie rolls very freely on a slight grade. It was fitted to GHG, JHG and PHG brake vans.

The 2AT style, now known as ASA, is a 6'6" (1.98m) bogie, which has 3' diameter wheels and was introduced in 1965. It has centrally mounted coil springs with outside shock absorbers and was fitted to JHG, OHG, KHG, FHG, GHG and EHG brake vans.

Investment cast in three pieces, the model is held together with screws, the components including the low centre bolster section. Captive springs are included for mounting, as well as recessed brake shoes which are in line with the 10.4mm fitted blackened wheels. Pinpoint axles provide smooth running. Wheelbase is 21mm (6') and the wheels have 14.4mm back-to-back and RP25 profile.

Both bogies are very handy additions to the NSWR scene.

Bob Gallagher

0-6-0 Locomotive in N scale by Life-Like. Imported by Southern Model Supplies, PO Box 112, Daw Park, 5041. Price: \$24.75

This little locomotive is an American outline 0-6-0 saddle tank loco, with pick-ups on four wheels by way of wipers on the flanges. The drive train from the five pole motor is to all wheels, which are mounted on plastic axles to provide insulation. The chassis is a metal casting which has a smooth finish. The body is a one piece plastic injection moulding with sharp detail and little sign of mould separation lines, etc. Details included are the domes, pipes, rivets and even the steps on the side of the tank. The cab windows are not provided with glass and the lettering on the side of the cab is very sharp. A lead weight is glued inside the smoke box area for added traction. The couplers are the standard Rapido type but the coupler boxes are







0-4-0 locomotive in N scale by Life-Like.



readily accessible if the modeller wanted to replace them with Kadee couplers.

For its small size and price it is a reasonable performer capable of pulling a small rake of cars, ideally suited to shunting duties or for a typical branchline type operation with a rake of four wheelers. With some modification to the cab and saddle tank this loco could be made to look like one of the units used at BHP's Port Kembla Steelworks. The cab would need to be shortened and the tank extended.

David Bennett.

VR-V/Line T class (3rd and 4th/5th production) diesel locomotives in HO scale from Samhongsa of Korea. Imported by Precision Scale Models, PO Box 15, Burwood 3125. Price: \$865.00 each.

For their first brass model Precision Scale Models (PSM) selected the second 'high cab/high nose' type and 'high cab/low nose' versions of the popular VR T class. Each model is available in the blue/gold VR and the orange/grey V/Line liveries.

To the casual observer the VR T class is very confusing, there being several production runs, plus a foreign addition, as well as a rebuild and many years of modifications. Jim Leppitt's article on this interesting locomotive class commences with this issue.

PSM selected the third and fourth/fifth production runs which have similar body styling but vary in cab and nose styles. The third production run is represented in the modified condition, as running in the eighties, with a cut-away valance and the fillets at the base of the cab removed. The two models represent the T357-T366 and T367-T386/T387-396 groups, excepting the rebuilt T360 (see T class article for further details).

The models have been produced by Samhongsa to their premium quality standard and comprise etched brass bodies detailed with etchings and investment castings. Both have the plain cast bogie fitted but are supplied with changeover four hole type as spares. The painted model is finished off in clear matt lacquer, and supplied in a foam lined box along with a limited edition

certificate and a colourful T Class booklet, which provides a brief outline of the class as well as advising of maintenance hints. A selection of numbers is also supplied.

Other spare parts include antenna, etched number box numbers for three of the class, screws and springs. The cab window bars, or grilles - a feature of the T class when introduced - are not supplied. Special attention has been given to the fitting and replacement of the etched nickel silver cab-side numbers, with a recess provided to ensure correct location and an easy release silicon adhesive on the back of the fitted numbers. Twelve different cab-side and number box numbers are supplied to allow numbering of any of the T357-T366 batch. Only four number sets were supplied with the low nose version, however. The review models were numbered 357 (VR) and 410 (V/Line), the latter being incorrect due to the lack of oil gauge inspection porthole above the exterior handbrake for the larger engine in the T407-T412 grouping.

Modellers choosing the modified T357-T366 group will need to be cautious if requiring an accurate road number. Research for the AMRM article has revealed that this modification was only applied to 358, 359, 361, 362, 363 and 364 with only 359 which was mothballed in March 1989 retaining the VR livery.

A word to describe the overall paint and assembly of the models would be 'exquisite'. Only a couple of minor discrepancies were noted: on the low nose model the cab windows above the nose were more rectangular than square and the angled portion of the sandboxes should be deeper. The cab window size is no doubt reduced by the oversized numberboxes, located above. These are removable for changing of numbers as well as being electrically lit.

Paint application is excellent. The VR wings on the nose have been applied by decals and are superb. The yellow line on the side has been applied by brush and is not as sharp as the decal wings.

The handrails are readily popped out of their holes, but this is normal with painted locomotives. The horizontals on the end handrails on the V/Line livery are

orange, but this is common with many locomotives. The side handrails, which have orange horizontals, are painted white.

The Ts are fitted with state-of-the-art lighting systems. The number boxes, twin beam headlights and marker lights are lit via a constant lighting unit that attains a continuous glow at 5 volts. The headlights only reverse with direction of travel, a nice touch. The cab is not lit and interior detail is limited to driver and observer seats. The cab windows are glazed and windscreen wipers are fitted.

Colour and prototype representation is excellent and, as the models are numbered, albeit some incorrectly, and are fitted with Kadee couplers, they are ready to be placed on the track for immediate speedy operation. The dimensions are tabled for comparison.

	Dimensional Data Prototype	Model
High Nose		
Length	41'8"	41'8"
Width	9,0,	8'113⁄4"
Height 13'103/4" 1	3'61⁄4"	
Bogie wheelbase	8'0"	8'11⁄3"
Bogie centres	22'8"	23'0"
Coupler pocket he	eight	11.25mm
Low Nose		
Length	41'8"	41'8"
Width	9'0"	9'0"
Height	13'103⁄4"	14'0"
Bogie wheelbase	8'0"	8'1½"
Bogie centres	22'8"	23'0"
Coupler pocket he	eight	11.25mm
The menhani		and the Heat O

The mechanism comprises an unlabelled Samhongsa built can motor driving each bogie via shafts/universal joints and a gear tower onto individual gearboxes on each axle. Wheels are preblackened, the pickup being on the rear of each wheel. With the complexities of the lighting, a switch is provided in the centre of the electrical boxes next to the fuel tank. All wires supplying the lamps and motor are neatly tucked away and are connected to the model by small plugs. This enables the body to be lifted clear of the

mechanism for servicing.

Each axle is individually sprung, although the springs are too strong to benefit compensation while running. The extensive piping is secured to the blackened underframe, all being visible below the low or cut-away valance.

On the track the two models were quite different. While responding to the movement of the controller, the low nose model was a little jerky in movement and this affected its performance when compared with its high nose sister. The 18 car load test was performed with minimal slipping. Other details are listed in the performance data

Performance Data

High Nose

69 mph (112 km/h) Top speed 12v Low speed 2 mph (3.5 km/h) Draw bar pull 75 gram

Low Nose

Top speed 12v 63 mph (101 km/h) 3 mph (5 km/h) Low speed Draw bar pull 80 gram

With some mechanism tuning, mainly running-in, these models will please many of the discerning modelling public. Of premium quality and cost, Precision's Ts importantly achieve the fine standards one associates with Samhongsa's production of Victorian diesel models.

Bob Gallagher and Ross Verdich

Broken Journeys, by Kenn Pearce, published by Railmac Publications, PO Box 290, Elizabeth, 5112.

This is the second volume on the topic of rail accidents from this author. It covers a wide gamut, from Cootamundra in 1895 to Bowmans (SA) in 1979 and Port Augusta in 1987. While railway accidents often attract excessive attention of the press, there is always a lesson to be learnt and the modeller can often get new insights into rollingstock from the photos of the relics!

Press reports are used to illustrate the contemporary view in some cases, and a brief summary of events and causes is given for each incident: this is not in-depth discussion, but is sufficient to clarify the causes. The photographs are graphic, but not gruesome: it is the damaged equipment which is illustrated, and, to the modeller in particular, they are invaluable. Reproduction is first class, and the book as a whole is well done.

Ian Dunn

The Disappearing World of Steam: Relics of the RAJ. Distributed by ARE Video, PO Box 8, Collins Street, Melbourne, 3000. Price: \$39.00.

Here is another well-made film from Nick Lera which should revive happy memories for those who have travelled in India, and provide rewarding viewing for those who have not. In 52 minutes, he gives us a very satisfying view of the range of steam travel available there in 1989.

The VHS tape begins with the 60 year old Gaekwar of Baroda's State Railway, and we are shown the busy 2'6" gauge system which is serviced by the largest narrow-gauge steam shed in the world. The variety of engines on shed is described in sufficient detail to satisfy both enthusiast and average viewer. The ZB class 2-6-2s are the mainstay of this system and there are plenty of action shots, including profile views which show the unusual distance between the front and back wheels and the drivers. Local customs and items of interest are included, especially where appropriate to the railway. Signalling, crossings, bridges and a characterful inspection trolley also add interest to the comings and goings of the trains.

The commentary is excellent and read with quiet authority. There is a pleasurable absence of jargon and unexplained acronyms which usually mar railway films of lesser quality.

The film proceeds in this manner, covering the impressive broad-gauge WDs in Goa, both the trains and the beautiful area photographed to great effect. The odd Patiala State Monorail, now housed and working in the Delhi Railway Museum, is shown, and we finish with a generous helping of the impressive X class 0-8-2 tanks happily thrashing their way into the Nilgiri hills. So, there is a great deal to enjoy on this tape, including some vintage material of broad gauge steam working out of Howrah Station in Calcutta.

The quality of the review copy was fair. The colours, especially the blues and reds, tend to bleed slightly in the way video copies do when pushed one stage too far, and I should have expected a better standard from a 1" master.

At \$39.00 this tape represents reasonable value, especially considering the quality of the film making. Because of this latter feature, it will stand repeated viewings and should give pleasure to many.

James McCarthy

Indian Locomotives Part 1: Broad Gauge 1851-1940, by Hugh Hughes, publisher The Continental Railway Circle. Distributed by ARHS Sales, PO Box E129, St. James, 2000. Price: \$19.95.

This 112 page, soft-covered book is the first volume in a projected tetralogy which will cover all Indian motive power on four gauges, from the inception of railways to modern times. This initial volume deals with the broad gauge motive power up to the introduction of the Indian Government Railways standard numbering scheme in 1940, and divides the subject matter up into classes of the various independent railways which formed the constituents of the later Indian State Railways. This inevitably leads to some duplication, as standard types were ordered from Britain by different companies at several periods in the era under review.

A very brief overview of the general locomotive history is followed by individual reviews and tabulations for each railway, listing class, loco numbers, builder, wheel arrangement, cylinder dimensions, maker, builder's number and date of construction for each type.

The material is authoritative, being culled from builders' lists and official records still preserved in the UK and supplemented by observations from several acknowledged inter-war English experts on locomotive matters on the sub-continent. A selection of photos is reproduced, but the choice is rather limited and tends towards the standard types, so that some interesting, and occasionally important, oddities are not illustrated. Quality of production and photo reproduction is very good and the tables are clearly set out.

For those with previous knowledge of Indian locomotives, the series will undoubtedly fill a need for complete tabular information, but for those wishing a more general introduction to Indian locomotive development it is likely to be unfulfilling. With that caveat, it is recommended to those whose interests lie in that area.

lan Dunn

Tender bolsters for Footplate C32 and D50 class models by Gwydir Valley Models, PO Box 595, Inverell, 2360. Price: \$2.50 pair.

These components are supplied to replace the cast metal bolsters on the DJH manufactured 32 and 50 class kits. The brass turned bolsters give the model stability and, if soldered in place, provide for excellent electrical pickup. 9mm in diameter, each bolster is 7.5mm high and is tapped to accept the cheesehead screw provided. Each pack of parts includes a detailed and illustrated instruction sheet, relating to the parts.

Bob Gallagher

Miniature Gas Torch, by Abbott and Ashby, Available from Quality Scale Models. Price: \$19.95.

This handy tool was seen at the Newcastle Exhibition from the stand of Quality Scale Models, which visits most exhibitions and conventions in NSW. It is a butane-powered torch, about 25cm long and as thick as your finger, which produces a nicely controllable pinpoint flame. It can be used for melting, soldering and paint stripping, as well as a number of other general household chores. Unlike many similar implements, this can be refilled directly from a standard butane pressure-pack available from any tobacconist. The flame is easily and finely controlled, and construction appears to be entirely of metal.

The only drawback I have found in use is its instability when placed on the workbench; it really needs a stand in or on which it can rest.

Its principal advantages are two: it can pump a lot of heat into a very localised area much faster than an electric iron, making it very useful for repair jobs on brass locomotives, and, of course, it doesn't have any trailing cord to get tangled up at crucial moments! Thoroughly recommended.

lan Dunn



VR-V/Line T Class Diesel Bogie Sideframes in HO scale by Scaleways, PO Box 142, Kallangur, 4503. Price: \$10.00 packet.

These detailing components are cast in grey epoxy resin, with minimal flash and a flat surface on the rear. While the detail is very sharp, it is basic as there is no evidence of rivets or bolts. Detail moulded in place includes axle journals, brake cylinders and holes in the top bearer.

The bogies are of the plain cast style without sand boxes. This style was fitted to the second, third and fourth series of the VR T class, as well as the P class. The wheelbase represented is correct at 8'0". These parts can be readily attached to a flat surface or brackets can be made to secure them to the bogies.

Bob Gallagher

NSWR Wagon Buffers in HO scale by Craftsman Models, 61 The Ridge, Helensburgh, 2508. Price: \$3.95 a packet.

The NSWR used many different buffer styles on their rollingstock and one of the most common styles was the parallel shank style used on the 18' steel underframe which was produced after WWII. Having a 15" face, the body of the buffer was short and squat, with little variation between the housing (8" dia.) and the shank (61/2" dia.) which generally only protruded 4" from the housing to the rear of the head.

Craftsman buffers are brass turnings, with eight to a pack. They are fitted with a 2mm x 0.8mm dia. securing spiggot and each pack includes details for fitting to the wagons, including producing the 10" x 10" x 1" mounting plate.

The face has the curved shape of the prototype and prototype/model dimension comparisons are shown in the following table.

	Prototype	Model
Face	15"	143/4"
Housing dia.	8"	81/4"
Housing length	9"	67/8"
Shank diam.	61/2"	61/4"
Visible shank length	4"	41/2"
Length	14"	133/4"

For steam era modellers, these are essential detail items and, as presented, are quality turnings.

Bob Gallagher

44 Years of 8444 - Videocassette from ARE Video, PO Box 8, Collins St, Melbourne. Price: \$49.95.

As the title suggests, this video takes us through the history of one of the most famous steam locomotives in active preservation, the Union Pacific's 4-8-4 FEF3 class, numbered 8444.

Up until now, there has been little movie or video footage available in Australia on the 8444 and the release of this video by the ARE has now filled this void.

The 8444, the last of Union Pacific's FEF3 class of Northerns, has been running in excursion service for close to 30 years now, almost twice as long as when it was employed in regular service on the Union Pacific.

The following is just a brief resume of the video's

- Witness the locomotive running in passenger and freight service with its original number, 844.
- Its use in excursion service over three decades.
- Together with UP's 4-8-8-4 Challenger 3985 at the Sacramento Rail Fair in 1981.
- At the New Orleans World's Fair in 1984, with some great pacing shots.
- As running after its repaint into two-tone grey livery in 1987.

In the 80s, the UP has been reluctant to run the 8444 more than two or three times a year, and then at comparatively conservative speeds, citing maintenance and spare parts problems. But this was not the case in the sixties when the UP had no qualms about attaching the 8444 to scheduled passenger trains, particularly for publicity prior to the takeover of these services by AMTRAK.

There is quite a deal of 'official' footage in this video, a fact which helps immeasurably the quality of the contents. Of course, advances in photography see a steady increase in the quality of the footage as the tape runs to its full sixty minutes' duration. Recent images of the 8444 in black and two-tone grey are truly superb.

The ARE state that the video was duplicated from a 1" master in Australia. In my opinion, this video's picture clarity is the best that I have viewed from the ARE stable.

As a bonus, the soundtrack is recorded in Hi-Fi stereo sound and is also, of course, synchronised.

I thoroughly enjoyed this video on the 8444 and highly recommend its purchase to any steam fan.

Ross Verdich.

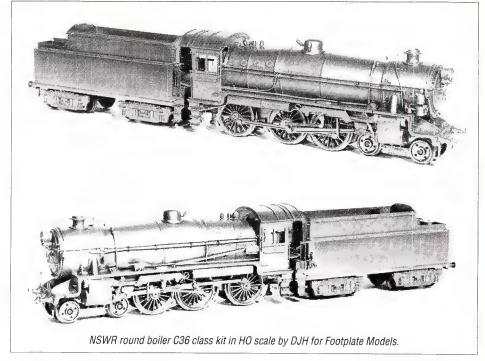
NSWGR C36 Class 4-6-0 Loco Kit with Roundtop Boiler by DJH Models. Imported by Footplate Models, PO Box 1, Higgins, ACT, 2615. Price: \$345.00.

Following on from the Belpaire version (see Review in Feb. 1990 issue), Footplate Models arranged for DJH to produce a limited quantity of the Roundtop. In order to keep the cost of the small number down, DJH used most of the major Belpaire components, simply making a new cab and firebox. In addition, the boiler had to have the dimples for the drilling of holes re-arranged. Because it would have been more expensive to re-make the whole etching, DJH has supplied the entire Belpaire etched sheets and added an extra etched sheet for the new cab. Accordingly, you will have to be a little careful when selecting some components. However, attention to these matters is brought before the builder in the instruction sheet. It is also extremely helpful to have a copy of John B. Thompson's book 36 handy to get an idea of what pipes you want to add to your particular model, as these differed from one loco to the next.

For the first time, I decided to try Carr's low melt temperature solder for a kit of this type. After some experimentation on scrap whitemetal pieces first, I can report that this is an excellent product and, in my opinion, is far better than the super glue with which I have built my previous six DJH kits. It is still necessary to use superglue in some instances, such as adding small detail parts.

In addition to the comments made by John Mc-Kenzie in his Belpaire kit review, the following points were noticed. There is not quite as much boiler detail to be fitted to this loco as there is on the Belpaire unit. On each side of the boiler there are two separate pipes to be fitted. The upper pipe is made using 0.4mm brass wire, which is mounted using stanchions made from turned brass. Whilst these work, and look excellent, the lower pipe on each side is 0.5mm brass and is designed to be mounted using small split pins as the stanchions. The holes in these split pins are too large and look a bit odd. If I were to build another kit, I would draw the hole in by. crimping together with pliers, which is what appears to have been done to the model in the photo on the kit's box.

The completed locomotive would have to rate as a 'Brass Brother'. Performance on the track is nothing short of brilliant, being very smooth, quiet and powerful. Unlike the previous C32 and D50 loco kits from DJH, the 36 has the motor and gearbox assembly as a single unit, which makes it much easier to assemble



and test the chassis without the necessity of having the boiler in place to hold the motor.

The kit needs to be treated with respect and I believe is better suited to the experienced kit builder rather than a newcomer. Time and patience need to be exercised; trial fitting of parts prior to gluing/soldering will ensure a good result. The task of bending the various pipes from the different sizes of brass wire supplied is also a challenge, but one which gives a great level of satisfaction as you witness a locomotive materialising at your own hands.

In summary, another excellent kit which adds to the scope available to the NSW modeller. For the more adventurous, there is the possibility of creating a Commonwealth Railways C class loco.

Bill Roach

NSWR 2AA and 2BS bogies in HO scale from AR Kit Co. PO Box 736 Grafton, 2460. Price: \$6.75 pair.

The recent additions to the extensive AR bogie range both cover passenger rolling stock. The first style coded 2AA also represents the 2SB style, both fabricated style and having a 5'9" wheelbase with 37" wheels, the latter generally spoked until changed in the 1970s. They were fitted to many of the tourist type cars, end platform suburban, BOB cars, CUB cars, R cars, dogboxes, EHO van, etc. The wheelbase is correct and the bolster is 8mm above rail level. The bolster provides for a 2.5mm dia. securing screw.

The 2BS type cast type has an 8'0" wheelbase and is fitted with 37" wheels. Initially they were fitted as replacements under the generator end of the PFH power car in the HUB set and in latter years were used as replacement bogies under all air conditioned stock and some FS and BS cars. The wheelbase is correct with the bolster height being 8mm above rail level. Like all other AR bogies the bolster provides for a 2.5mm dia. securing screw.

Both bogies have been moulded in a deep grey plastic, the moulding detail being superb. Recessed brake shoes are fitted and bold detail is prominent. The 2AD style could be represented by the 2AA by the placement of a lower bar/wire between W irons.

While both are very welcome additions to the market, especially the 2AA style, the latter may be difficult to use in that many of the cars they were used under, especially the suburban end-platform style, had steps which will restrict the swing of the bogie. Some judicious step placement will be required.

Bob Gallagher

QR locomotive and wagon decals in HO scale by Far North Hobbies, PO Box 754, Mackay 4740. Price: \$3.45 a pack.

Two packs make up the Far North Hobbies decals, which are produced in Queensland and designed to be used with the Far North range of Queensland Railways kits. Both are packed in a resealable plastic bag and have a card top. application instructions are not included.

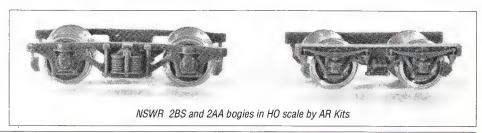
One pack is designed for use with locomotives and includes six 10.5mm x 31mm red/orange QR logos for the side of the locomotive hood. The remaining four sheets supply the deep yellow 3.5mm high numerals for the class numbers. These numbers cover the 1200, 1250, 1300, 1460, 1500 and 2170 classes with plenty of individual numbers to permit number swapping.

The other pack includes four red/orange 5mm x 15.5mm QR logos and a sheet of black wagon/car codes and numbers, which are 1.4mm high. Codes included on the sheet are QLX, PYC, TGVH, CO, HO, HWO, R, BRM, G along with upper case 'guard' and 'staff only' signs. Each code is represented four times with two separate road numbers for each. Additional numbers provide for any necessary alterations. Also included on the sheet are four sets of 'Do Not Loose Shunt' phrase, 1.8mm high, all upper case.

Reproduction is sharp and the film thickness very fine. The printed section has been applied to a narrow width of film on the backing paper. After soaking in water it slides very easily of the backing paper, has excellent adhesive features and despite the thinness of the film, does not easily break up when being worked.

Very handy products for the HO scale QR modellers.

Bob Gallagher



NSWR Bogie Shunter's Wagon Kit in HO scale by Lloyd's Model Railways, PO Box 57, Latham, 2615. Price: \$39.95.

The prototype of this kit was built in the 1970s from turret tender underframes, the wagon not only supplying a moving platform for the shunter, but also additional braking for the light 73 class diesel shunter. Generally they were close-coupled in pairs.

The kit comprises cast metal components for the two wagons. The deck is attached to a four section underframe. Although the deck is too thick, it has a tread plate finish, while the sides and end sills have rivet detail. Additional detail includes brake cylinders and side steps.

The bogies are supplied in three pieces, along with 10.5mm K&M wheels, brass bearings and metal bolsters. They are attached with the screws and nuts supplied, which have to be shortened to length. Assembly was by low melt solder, as suggested in the highly detailed instructions.

The handrails have to be formed out of the coil of brass wire supplied. Although the instructions cover straightening of the wire, it was not found to be easy and it was replaced with K&S 0.020" brass wire. Adding the handrails is the most difficult task and is fully covered in the instructions. The task would have been easier with a jig. The upright wire was cut to length and attached to the base by securing in the hole that has been previously drilled. A section of 11mm x 5mm cork (balsa will do) was used to locate the top rails, while a section of 5.25mm x 5mm cork was used for the lower handrail.

After completion of the handrails, the handbrakes were added.

As supplied, the kit is complete and designed to use Kadee No.5 couplers. However, there has been no provision of a mounting block. Each wagon is 25'00" long and 9'00" wide and weighs 100gm.

Completed, the kit makes a fine model that will be quite handy in a large diesel-shunted yard.

Graham Ball & Bob Gallagher

The Edwardian Scene, 1902-1912, videocassette trom Miniature World, 530 Great Western Highway, Faulconbridge, 2776. Price: \$59.95.

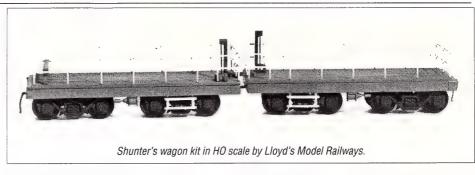
In the June 1990 issue of Australian Model Railway Magazine, we reviewed a videotape entitled *Victorian Steam Railways, 1895-1901*. Following on from this title, we now have the second of the series and it deals with *The Edwardian Scene, 1902-1912*.

Once again narrated by John Huntley, the video covers an era that most of us never knew. The rapid advances in filming techniques are most obvious as we cover the early years of this century. The various movies shown are from the archives of Elstree Studios in London and commence with excerpts from the world's first story film - a train robbery!

Other titles from which excerpts are shown include such titles as 'The Jonah Man' of 1904, 'An Englishman's Trip to Paris' of 1904 and 'When the Devil Drives' of 1907. This last movie is of particular interest to model railway fans as it includes footage of Bassett-Lowke model trains used to represent the real train as it crashes off a bridge into deep water. Although a little corny by present-day standards, there would have been a lot of mystery and intrigue in these sequences for theatre patrons in 1907.

Many of the scenes are filmed in England and show rare footage of the pre-grouping railway companies' rollingstock. I was impressed by the parallel running on the London & North Western Railway's Main Line in the Berkhampstead area just to the north of London. This area is now outer suburbia on British Rail's West Coast Main Line.

To me, the highlights of the video are the sequences shot in the two railway workshops. Firstly, in the Crewe Works of the London & North Western Railway in 1911, we see their 6000th locomotive being completed. As a bonus, we are given a glimpse of the unusual 18" (457mm) gauge railway that operated within the Works. Secondly, we are treated to a visit to that hallowed hall of steam construction - the Great Western Railway's Swindon Works. Here we see the



construction of loco No. 4041 Prince of Wales of the Star class of 4-6-0 express passenger locos. These sequences are just pure engineering nostalgia.

In summary, a very good 55 minutes of historic footage with quality consistent with the age of the material. It is very enjoyable to see these early scenes from an era that is normally associated (in books) with large format, posed builder's photos and postcards from professional photographers. A worthy sequel to the earlier video.

David Taylor

NSW Banana Growers' Federation logo decal in HO scale from AR Kit Co. PO Box 736 Grafton, 2460. Price: \$2.70.

As detailed in David Low's article in the February 1990 issue, the NSW Banana Growers' Federation is using a number of ex LLV/GLV/GLX louvre vans for transporting its product from northern NSW to all points south. Many of these vans, coded NLBF/NLBA, have been adorned with yellow lining as well as a logo or two. AR Kits have packed their GLX kits with the 'Unzip a Banana' sign, it being marketed as a NLBX, the kit being reviewed in the December 1989 issue.

The BGF have a second logo, made up of yellow and green shapes. These are fitted to a 1.3m x 1.3m plate and located in the top left hand corner on the side of the van. Some vans have this logo only, some have both with the yellow lining differing greatly among vans.

Produced by Broad Gauge Bodies for AR Kits, the decals, two to a sheet, are correctly sized, shaped and coloured. A yellow border surrounds the shape, supplying a line to cut inside to separate the decal from the sheet. There are no instructions with the decals apart from the normal BGB decal application instructions.

It would be wise to apply the decal to a section of 15mm x 15mm x 0.005" styrene sheet which could be fixed to the side of the van. Use David Low's article for location.

Bob Gallagher

S/Sn3 model railroad catalogue from Scenery Unlimited, 7236 W. Madison St, Forest Park, Illinois 60130. USA.

Minority scales always have the problem of product availability in hobby shops. Products are nearly always available, but not necessarily in the closest shop. Thus, product catalogues are of importance to manufacturers/importers alike.

S scale is a very popular modelling scale! So popular that some modellers will be offended by the inference that it is a minority scale. This 112 page book is packed full of products, based on American prototype. Prices are included in US dollars when obtained direct from Scenery Unlimited. It is interesting to see a diagram of Alco's S scale Climax on display.

Ordering instructions are included inside the front cover (which is adorned with a superb colour dock scene).

If you model S scale, this book would be an important purchase, for it covers all aspects of the modelling scene. The US phone number is 708 366 7763.

Bob Gallagher

Corrugated iron sheet in HO scale from AR Kit Co. PO Box 736 Grafton, 2460. Price: \$2.34 a pack.

If modelling Australia, corrugated iron is an essential modelling material. AR's corrugated iron is avail-

able in 6' and 8' lengths, each pack being enclosed in a poly bag with card backing and a card top. Rolled out of aluminium sheet, the corrugations are the correct 3" scale wide. The sheets are 85mm long, there being five to a pack.

The 6'0" sheets are 21.5mm high with the 8'0" sheets 28.5mm high, both a shade (15%") over length.

With the correct number of corrugations per foot, these sheets are very useful building items.

Bob Gallagher

NZR Locomotives and Railcars 1990, by T.A. Mc-Gavin from NZR&LS. Distributed in Australia by ARHS (NSW) Division, PO Box E129, St James, 2000. Price: \$25.00.

This is the ninth edition of the author's survey of the motive power of New Zealand Railways. Changes with this revised edition include four pages of colour and some rearrangement of the format to accommodate an expanded electric traction section.

This 65 page soft-cover book is divided into six chapters. The first five deal with electric and diesel motive power and the sixth covers recent developments in preserved steam. It provides developmental information and basic data on each class of locomotive, railcar and multiple-unit coach now in use, together with a list of road numbers, maker's numbers, dates into service and retirement.

The book is well illustrated with carefully selected photos and a number of dimensional drawings are also included.

The NZR&LS has consistently maintained a high standard with its publications and this book, too, falls into that category. Definitely recommended for those with an interest in NZR.

Ross Verdich

Australian Shedbook, by the Locomotive Club of Great Britain. Available from ARHS Sales, PO Box E129, St James, 2000. Price: \$9.95.

This A5 booklet was prepared for touring by the publisher's members visiting Australia in 1989. It has been simply prepared by typing and photocopying, and is full of information. It is ideal for the novice for it explains the gauge variations and it lists each system its loco depot locations and follows on with a list of each locomotive and its depot location. Some basic information on each class is provided.

Such an enormous coverage could not be error free, and some of these are listed in the centre pages. This is a basic publication, but of use to railfan and modern image modeller alike.

Bob Gallagher

Yeardon's Register of LNER Locomotives - Volume One - Gresley A1 and A3 Classes; London & South Western Railway Engine Sheds; LMS Engine Sheds -Volume Seven; The Marlborough Branch. Review copies provided by the Australian distributor, ARHS (NSW) Division, PO Box E129, St James, 2000. Prices in text.

Irwell Press have released four more books on various railway subjects in the Mother country. A brief precis follows on each. Again we see evidence in each publication that Irwell Press has maintained its strong commitment to publishing well researched and high quality books.

Yeardon's Register of LNER Locomotives - Volume Continued on page 64.

SUPERIORITY DOES NOT COST IT PAYS

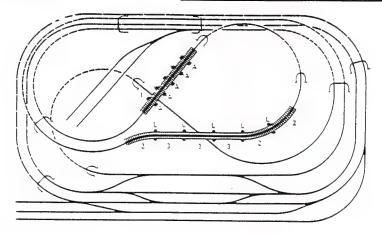
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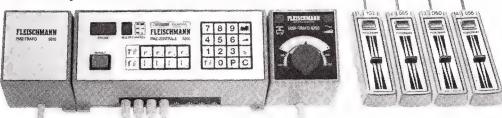
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Continued from page 62

One - Gresley A1 and A3 Classes (Price: \$39.95). This, the first in a series, lists, in chronological order, details such as building and shopping dates, major and minor events, modifications, alterations, boiler and tender numbers, allocations and dates, renumberings, namings and, finally, the disposal of each locomotive.

This book and those following would have to be the last word in locomotive research. The author of the series, W.B. Yeardon, has spent 55 years carefully and painstakingly documenting LNER locomotive history. The selection of Sir Nigel Gresley's A1 and A3 classes of Pacifics is an excellent choice for the first volume. Containing 90 pages, the bulk of the information is. not unexpectedly, in tabular form with a good supply of black and white photographs illustrating the various guises of the Gresley Pacifics, each with extended captions.

London & South Western Railway Engine Sheds -Western District (Price: \$49.95). This is the first of three volumes intended to cover the entire LSWR, one of the constituent companies of the Southern Railway at grouping. The LSWR wound from London to the west of England, taking in the more scenic parts of Devon and Cornwall, an area popular with holiday makers and enthusiasts.

This 138 page volume describes the engine sheds from Salisbury westward, plus the various branches. The detailed text gives a fascinating insight into their everyday working and traces the history of each location from founding to closure. Many track plans are included, some dating back to the very earliest times in the west

LMS Engine Sheds - Volume Seven - The Glasgow & South Western Railway (Price: \$49.95). This volume in the LMS engine shed series describes the unusual collection of buildings the LMS inherited from the Glasgow & South Western Railway. Amongst the most elegant to be found in Britain, they had a lightness of construction that belied the massive red sandstone used in construction. The high cathedral style roofs carried off smoke without recourse to the expensive complicated troughing commonly found in England. The sheds of this provincial line were noted for their careful attention to track layout, allowing a logical servicing procedure.

This 130 page book follows the usual format adopted in previous volumes. It is divided into two principal parts. The first is an account of those G&SWR sheds still operating in 1947, whilst in the second those falling into disuse before Nationalisation are noted. The sheds open in 1947 have track plans and some homologous structure diagrams.

The Marlborough Branch (Price: \$39.95). The research into and subsequent publication of this 90 page hard-cover book is remarkable, given the relatively early closure of this ex-GWR branch.

Situated in the county of Wiltshire, Marlborough boasted two stations and a direct route to London. Competition had led to the formation of two separate and independent railways in the region. The Midland and South Western Junction line skirted the town but served it via a station called Marlborough Low Level. The GWR constructed a small five mile branch from Savernake on its main west of England line, to a small compact terminus, also at Marlborough, within a stone's throw of its competition, albeit at a slightly higher level. This situation existed for 35 years until the GWR absorbed its smaller competitor and rationalised the situation in 1923.

The whole story is quite intriguing and the book's authors have included many maps, timetables and

> ADVERTISING DEADLINE February 1991 Issue Advertising deadline is: December 6, 1990.

The February 1991 issue should be available at the normal outlets by January 20, 1990.

photographs to complete the presentation.

Modellers, this book offers excellent ideas on having branch line termini in close proximity to mainlines. For those who argue for such practice, it is a very good case study.

Ross Verdich.

Preserved Locomotives of Australia and New Zealand, by the Locomotive Club of Great Britain. Available from ARHS Sales, PO Box E129, St James, 2000. Price:\$9.95

Another simple publication for the publisher's members to use when touring. A5 in size, it has also been produced by typing and photocopying, and is 64 pages thick. Broken up into ten sections representing eight Australian States and Territories and the two main New Zealand islands, Entries are preceded by a four page listing of locomotive builders. Sections list these entries with the location, including address, and the vehicles preserved tabulated, which includes railmotors. An extensive list, some errors have been detailed in a centre section. A fully revised second edition, it is of value to any rail enthusiast who travels. Bob Gallagher

Large Scale Automatic Working Knuckle Coupler, by Delton Locomotive Works. Review sample from The Big Train Station, 37 Woodmason Rd, Boronia, Vic. 3155. Price: \$9.00.

Now available separately in Oz are Delton's superb knuckle couplers in packets of two, Part No. 5201. These fit LGB and Kalamazoo trains.

The easy-to-follow instructions on the packet's label show the simple installation procedure, a process that only took a few minutes for each coupler. They were mounted Talgo style on LGB's trucks, using screws which were also supplied.

Body mounting the couplers would also appear to be possible, but with a greater deal of difficulty for the modeller. The installation would look more prototypical but coupling rollingstock would be difficult on the sharp curves inherent with large scale modelling.

Large scale modellers should welcome the availability of these couplers. The replacement of those toy-like loop and hook couplers with Delton's would enhance the appearance of any large scale model.

Ross Verdich

1/2" Scale Castings. Review samples from The Big Train Station, 37 Woodmason Rd, Boronia, Vic. 3155. Prices in text.

Tony Walshman of the Big Train Station has available a comprehensive range of detail parts for the large scale modeller. Made in the US, these accessories have a good fidelity of detail, an essential requirement for items that, in this scale, are very visible.

Items inspected from the large range available included lost wax brass castings from Trackside Details and whitemetal accessories from Ozark Miniatures.

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From Trackside Details: locomotive handrail posts and flag holders - 10 pieces for \$15.00 (Part TD-21); and locomotive bell kit - \$20.00 (Part TD-10)

From Ozark Miniatures: boxcar corner brace set -\$6.00; platform scale kit - \$5.50; and loco tool set -\$17.00 (Part nos. OM-17A, OM-54 and OM-2029 respectively). The loco tool set should prove to be popular. It contained two coal shovels, two loco jacks, a lantern, a hammer, a monkey-wrench, oiling cans and firebox rake and pricker. After painting, these items would be perfect adornments for large scale steam locomotives.

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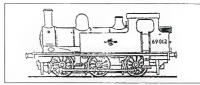


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Australian MODEL RAILWAY Magazine. December 1990. Page 69.

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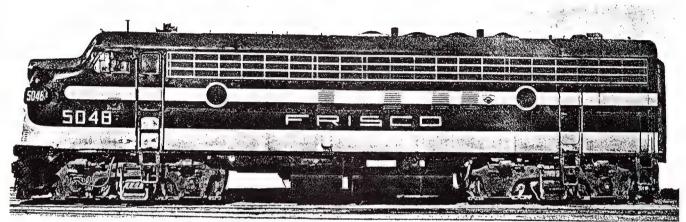
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Due to the small quantity being made, these kits are only available direct from the Manufacturer.

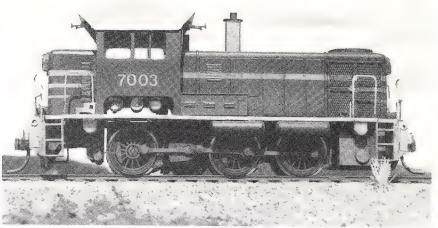


Photo by James McInerney

Price \$195.00 + \$5.00 Post and Insurance.

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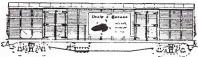
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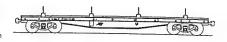
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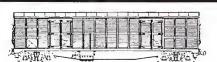
NLBX - Banana Van

MLE - Flat Wagon HMX - CMX UME - LE - JME - GME - HME

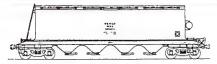
\$ 156.60

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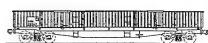
\$17.60



GLX - Louvre Van GLV



WHX - Aluminium Wheat Hopper

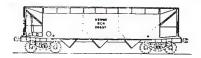


BDX - Corrugated Side-Open Wagon

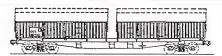
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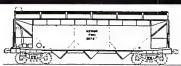
\$ 17.60



BCH - Coal Hopper FCH - HCH



 ${f CCX}$ - Corrugated Side-Open Wagon Kit for Carrying Coil Steel



FWH - Wheat Hopper BWH - BRH - LBH - HRH

\$ 17.60

\$ 17.60

\$17.60

CFX - Container Truck (not shown)



OCX - Container Truck (with 2 containers)

9.5mm dia. 25mm axle length

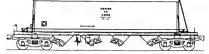
10.5mm dia. 25mm axle length

10.5mm dia. 26mm axle length

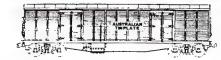
10.5mm dia. inside bearings

Brass Bearings

9.5mm dia. 26mm axle length



CH - Aluminium Coal Hopper



TLX - Tin Plate Van

\$ 23.40 (without Containers \$ 17.60)

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Brake Detailing Kit	6.30
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Corrugated Iron (15cmx17cm)

Decals

\$ 1.17

1.17

1.17

1.17

1.44

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SAR/ANR 600 Class

- 602 Mustard Pot Red & Chrome - 604

NSW 81 Class

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by Richard BUTCHER

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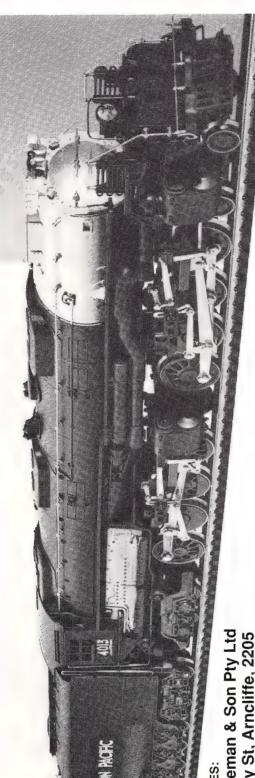
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102 #4 Right Hand Point	14.70	340 Rail Joiners (Doz/Bag)	1.90	633 90 Deg. Crossing	12.1
103 #6 Left Hand Point	16.45	342 Ins. Rail Joiners (Doz/Bag)	1.45	636 Left Hand Yard Point	42.8
104 #6 Right Hand Point	16.45	360 Rail Spikes (10g/Bag)	3.55	637 Right Hand Yard Point	42.8
105 #8 Left Hand Point	17.65	370 Rail Only 1000mm	2.35	650 Switch Machine	9.1
106 #8 Right Hand Point	17.65	371 #8 Left Hand Curvable Point	29.10	651 Linkage	3.5
107 #4 Wye Point	16.45	372 #8 Right Hand Curvable Point	29.10	340 Rail Joiners (Doz/Bag)	1.9
108 #6 3 Way Point	34.30	375 Space Tie	1.75	342 Insulated Rail Joiners (Doz/Bag)	1.4
109 #6 Left Hand Single Crossover	29.55			360 Rail Spikes	3.5
110 #6 Right Hand Single Crossover	29.55	Code 70 HOn3 Nickel Silver		ood Hall Opinoo	0.5
111 #4 Double Crossover	47.95	401 #4 Left Hand Point	13.75	Code 83 HO Nickel Silver	Cua Poto
112 #6 Double Crossover	51.30	402 #4 Right Hand Point	13.75	803 #6 Left Hand Point	Sug. Reta
113 #4 Double Slip	42.90	403 #6 Left Hand Point	13.75		16.4
114 #6 Double Slip	44.80	404 #6 Right Hand Point	13.75	804 #6 Right Hand Point 805 #8 Left Hand Point	16.4
115 Flex Track 1000mm	7.50	415 Flex Track 1000mm	7.15	806 #8 Right Hand Point	17.6
116 Single Guard Flex Track 490mm	9.00	430 30 Deg. Crossing	16.45	808 #6 3 Way Point	17.6
117 Double Guard Flex Track 1000mm	16.35	431 45 Deg. Crossing	16.45	812 #6 Double Crossover	34.3
118 #6 Wye Point	17.80	432 60 Deg. Crossing	16.45	814 #6 Double Crossover	51.3
126 #6 Left Hand Curve Point	23.10	433 90 Deg. Crossing	16.45		44.8
127 #6 Right Hand Curve	23.10	450 HO/HOn3 Dual Gauge #6 Point L-1		815 Flex Track 1000mm	7.8
128 #8 Left Hand Curve Point	29.10		34.35	828 #8 Left Hand Curve Point	29.1
129 #8 Right Hand Curve Point	29.10	451 HO/HOn3 Dual Gauge #6 Point L-2		829 #8 Right Hand Curve Point 840 Rail Joiners (Doz/Bag)	29.1
130 30 Deg. Crossing	16.45	10 THOM Dual dauge wor only E E	34.35		1.9
131 45 Deg. Crossing	16.45	452 HO/HOn3 Dual Gauge #6 Point R-1		870 Rail Only	2.8
132 60 Deg. Crossing	16.45	102 . 10/110/10 Data Gauge #01 Ollit N-1	34.35	890 #2.5 Wye Point	16.4
133 90 Deg. Crossing	16.45	453 HO/HOn3 Dual Gauge #6 Point R-2		891 #5 Left Hand Point	16.4
134 Left Hand 9.5 Deg. Crossing	22.20	400 FIGHTON Bull dauge #01 oilleft 2	34.35	892 #5 Right Hand Point	16.4
135 Right Hand 9.5 Deg. Crossing	22.20	465 HO/HOn3 Dual Gauge Flex Track 1		893 #3 Wye Point	16.4
140 Rail Joiners (Doz/Bag)	1.90	470 Transition Track Left	10.95	894 #7 Left Hand Curved Point	29.1
142 Insulated Rail Joiners (Doz/Bag)	1.45	471 Transition Track Right	10.95	895 #7 Right Hand Curved Point	29.1
147 16" Rad Curved Track	3.75	340 Rail Joiners (Doz/Bag)	1.90	0.1.00110.01/18.1.1011	
148 18" Rad Curved Track	3.75	342 Ins. Rail Joiners (Doz/Bag)	1.45	Code 60 HOn2½ Nickel Silver	40.0
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150 22" Rad Curved Track	4.05	ooo rian opikes (rog/bag)	3.33	761 150mm Radius Right Hand Point	19.0
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152 26" Rad Curved Track	5.25	Code 70 12mm Gauge Nickel Silv (Suitable for HOn3½ and TT	/ei	763 200mm Radius Right Hand Point	19.0
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154 30" Rad Curved Track	5.70	504 #6 Right Hand Point	16.45	765 97mm Long Straight Track	1.9
155 32" Rad Curved Track	5.70	515 Flex Track 1000mm	7.20	766 150mm Long Straight Track	1.9
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157 36" Rad Curved Track	5.70	Code 70 Sn3 Nickel Silver		768 200mm Radius Curve Track	2.3
160 Rail Spike (10g/Bag)	2.65	1003 #6 Left Hand Point	16.45	769 500mm Flex Track	4.9
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301 #4 Left Hand Point	14.35	342 Ins. Hall Joiners (Doz/Bag) 360 Rail Spikes (10g/Bag)	1.45 3.55	174 Diaphragm	5.2
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307 #4 Wye Point	15.25		14.65	703 #6 Left Hand Point	17.2
308 #6 3 Way Point	34.30	604 #6 Right Hand Point	14.65	704 #6 Right Hand Point	17.2
312 #6 Double Crossover	51.30	607 #4 Wye Point	14.65	715 Flex Track 900mm	6.5
314 #6 Double Clossover	46.20	608 #6 3 Way Point	34.35	740 Rail Joiners (Doz/Bag)	1.9
315 Flex Track 1000mm	6.55	612 #6 Double Crossover	51.45	742 Insul. Rail Joiners (Doz/Bag)	1.4
317 Double Guard Flex Track 1000mm	12.25	613 #4 Double Slip	51.45	0 1 1000 0	
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		615 Flex Track 900mm	5.80	903 #6 Left Hand Point	22.7
327 #6 Right Hand Curved Point	29.55	626 #6 Left Hand Curve Point	22.20	904 #6 Right Hand Point	22.7
330 30 Deg. Crossing	16.45	627 #6 Right Hand Curve Point	22.20	915 Flex Track 1000mm	9.0
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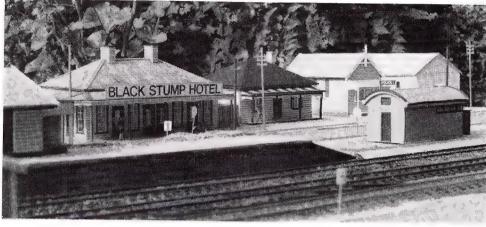
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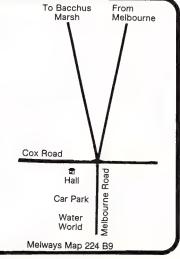
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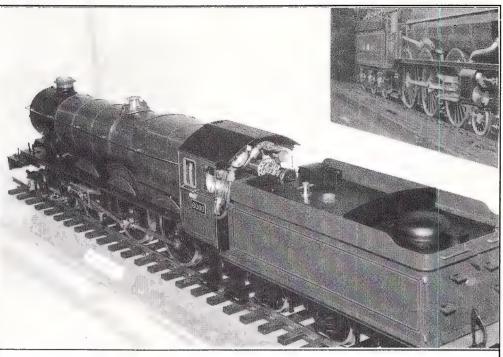
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G.W.R. KING GEORGE V SPECIFICATIONS

Scale/Gauge1/32, No 1 Gauge (45mm)
Total Weight 6 Kg Dimensions Length 664 mm
Dimensions Length664 mm
Width90 mm
Height130 mm
Wheels Arrangement 4-6-0, stainless steel, all insulated
Drivers Diameter 62 mm, coil spring action
Pilot Truck Diameter 26 mm
Minimum Radius
Engine4 Cylinders Bore 11 mm x Stroke 20 mm
Steam Port 1.5 mm, Lap 1.4 mm
Valve Travel 5.8 mm, Cut off 77%
Valve Gear
Boiler Type "C" Type, Capacity 270 cc at 80% full
Pressure 3.5 to 4.0 Kg/cm²
Pressure
Blower Valve, Water Gauge, Whistle, Whistle Valve, By-
Pass Valve, Water Check Valve.
Feed Water Pump Axle Driven Pump mounted
on the main driver Pump Ram 5 mm x Stroke 6 mm.
Lubricator Roscoe Displacement type located in the
smokebox. Capacity 2.6 cc.
Tender Truck Wheels Stainless Steel 39 mm Diameter
Fuel Tank Capacity 180 cc (at 80% full) of methanol
Water Tank Capacity 200 cc
Feed Water Pump Hand operated pump mounted
in the Water Tank. Pump Ram 10 mm Stroke 16 mm.
Alcohol Burner3 Wick Tube Alcohol Burner
Alectic Daniel Mick Tabe Alcollol Bullet

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KING GEORGE V

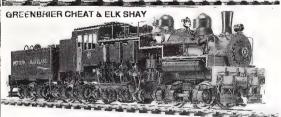
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į	Great Western King George V 4 Cylinder
ĺ	Greenbrier Cheat & Elk three geared truck Shay \$4500 Kit \$5195 Bullt

NOTES: Stocks of locos marked with an * are low and cannot be replaced. The Greenbriers Shay is a superb Limited Edition model, it is in stock now however will not be available for long (total production 80 models). The JNR C11 tank was released in January but only with Japanese instructions, now in stock with English instructions and should be available for the next two years. This model is relatively easy to assemble and taxes over from the DB Class 86 tank as an ideal first loco kit for the newcomer to live steam construction. (We have two DB 86 kits remaining, 'Aster' has none)

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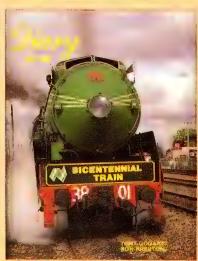
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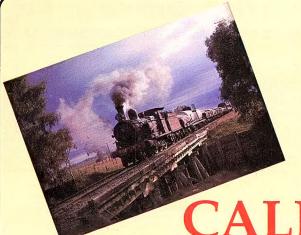
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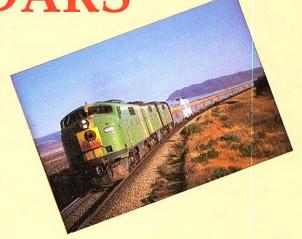
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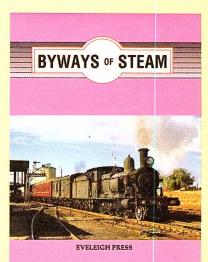
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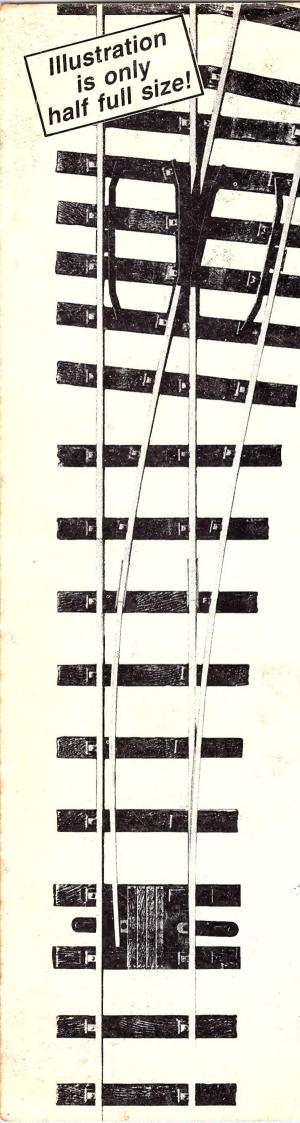
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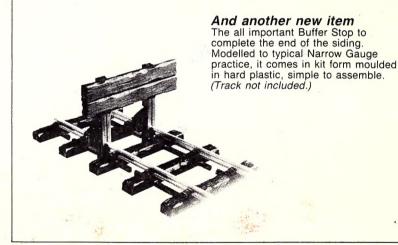
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